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DOCUMENTS
OF THE
CITY OF BOSTON
FOR THE YEAR 1898.

IN THREE VOLUMES.

VOLUME II.

CONTAINING DOCUMENTS FROM No. 21 TO 38 INCLUSIVE.

Published by Order of the City Council.



BOSTON:
MUNICIPAL PRINTING OFFICE.
1899.

DOCUMENT

CITY OF BOSTON

FOR THE YEAR 1908

THE FINANCIAL STATEMENT



CONTENTS OF VOLUME II.

CONTAINING CITY DOCUMENTS FROM NO. 21 TO 38, INCLUSIVE.

(See also Index in back of book.)

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ANNUAL REPORT OF THE LIBRARY DEPARTMENT

FOR THE YEAR 1897-98.

TRUSTEES' REPORT.

TO HIS HONOR JOSIAH QUINCY,

Mayor of the City of Boston :

The Trustees of the Public Library make the following as their report of its condition for the year ending on January 31, 1898 :

For statistics and information relating to the great increase in all departments of library work, to the number of books and number of readers, to the interest in the Children's room, and in the Newspaper room ; to the need of greater facilities for administration in the central building and in the branches, to the work of printing and binding, and to the co-operation with neighboring libraries, we refer to the full report of the Librarian upon each one of these subjects, and we invite particular attention to the very complete appendices accompanying the report. Rather than give any abstract of these, we ask every person who wishes to know what the work of a great library is, and what opportunities are open to it, to make a careful study of them. The following statistics are all that need be quoted here :

The cost of maintaining the Library during the year was	\$259,096 65
Of this amount the city appropriated	\$235,000 00
The trust funds yielded	10,450 84
	245,450 84
The balance of the cost	\$13,645 81

was obtained from rents of the old library building, receipts from sale of catalogues, fines and miscellaneous gifts.

Books.—The number of books in all the departments of the Library on January 31, 1898, was 698,888, of which 528,079 were in the Central Library—an increase of 35,129 over the number on January 31, 1897.

Use of the Library.—The total number of active cards outstanding January 31, 1898, was 64,973, a gain of 19,367 over those of the previous year.

During 1897, 1,199,658 books were circulated for home-use—a gain of 194,639 volumes, or 19½ per cent. over those used in 1896.

It will be seen by the foregoing that the immense home use of the books of the Central Library (to which should be added those of the branches and reading rooms), the great use of the books and other matter in Bates Hall, in the Children's room, in the Periodical and Newspaper room, and generally throughout the Central building, show that the people appreciate the benefits of this great educational institution. This anticipated appreciation led to its organization and made it an object of constant solicitude on the part of the citizens from the beginning. The money required for its maintenance has always been readily given, and the Trustees indulge the hope that whatever is needed in the future to supply its wants will also be granted.

Endowments.—The popular interest in the Library is further shown by the many endowment donations during the year. We gratefully mention that of the Twentieth Regiment Association of Massachusetts Volunteer Infantry of \$5,000, the income of which is to be expended in the "purchase of books of a military and patriotic character;" that of \$1,000, from the Papyrus Club in memory of John Boyle O'Reilly, the income to be used "for the purchase of books;" that of \$1,000 from the estate of the late Caleb D. Bradlee, D.D., for any library purpose deemed proper by the Trustees.

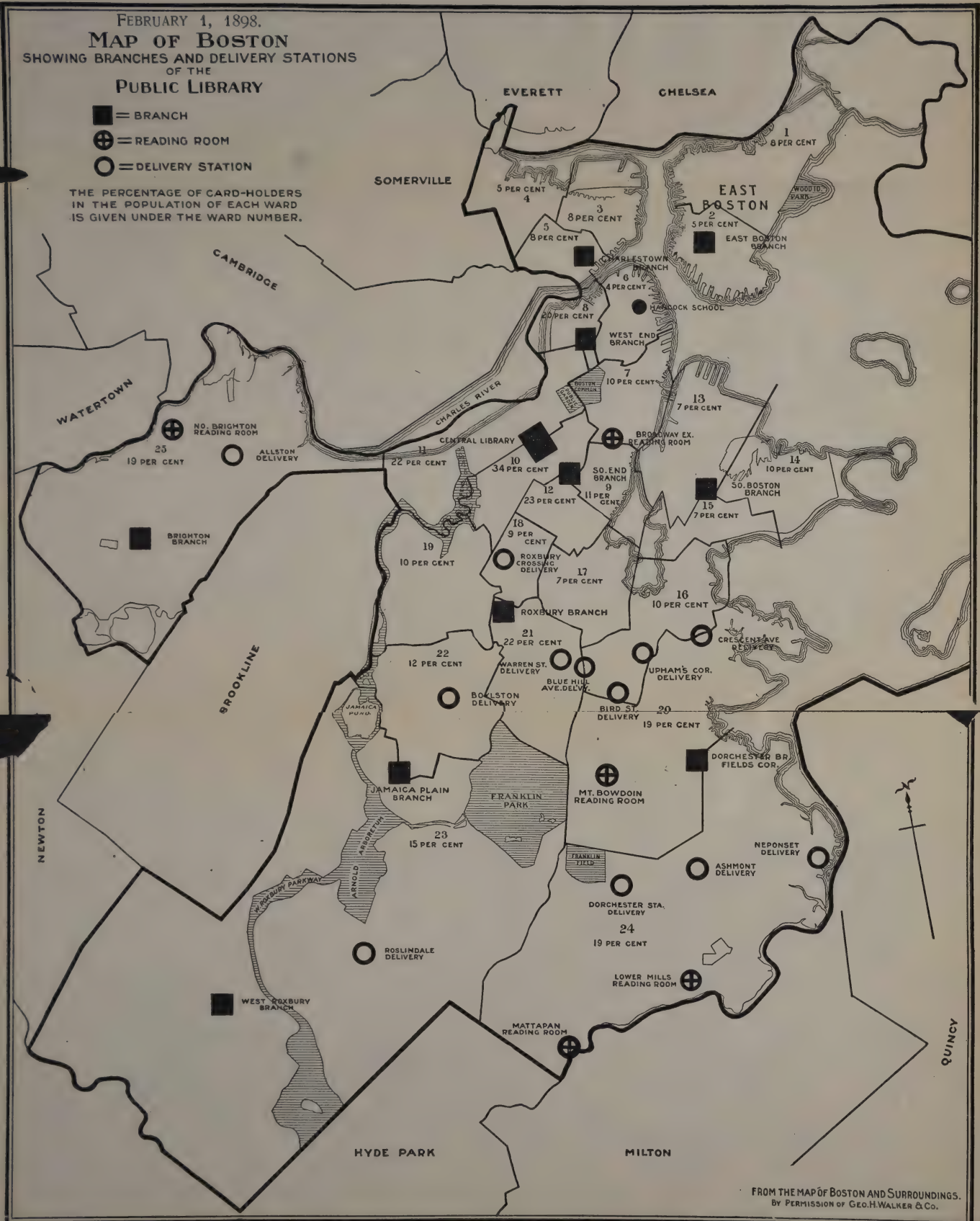
Mr. William C. Todd, pursuant to his intention expressed in his letter of June 16, 1893, paid to us in October last the sum of \$50,000, the income of which is to be appropriated to the purchase of current newspapers, domestic and foreign, for the use of all, whether citizens or strangers, who desire to read them—a valuable addition to our Library which is well appreciated.

The bequest of the late John C. Paige, whether or not it result in a substantial addition to the funds of the Library, is noticeable for the wise humanity of its purpose and for the generosity of its terms. It is unfettered by condition, but

FEBRUARY 1, 1898.
MAP OF BOSTON
 SHOWING BRANCHES AND DELIVERY STATIONS
 OF THE
PUBLIC LIBRARY

- = BRANCH
- ⊕ = READING ROOM
- = DELIVERY STATION

THE PERCENTAGE OF CARD-HOLDERS
 IN THE POPULATION OF EACH WARD
 IS GIVEN UNDER THE WARD NUMBER.



FROM THE MAP OF BOSTON AND SURROUNDINGS.
 BY PERMISSION OF GEO. H. WALKER & CO.

Area of City, 43 Square Miles.

Population, 528,912.



THE CHICAGO COUNCIL HAS MADE AN ORDER
 IN THE REORGANIZATION OF THE CITY
 THE PRESENT VALUE OF CHICAGO

Area of City, 43 Square Miles.

Population, 528,912.

accompanied by the expression of a desire that it "shall be used, so far as may, in the judgment of the Trustees, be expedient, for the purposes of the Children's Reading-room." The Trustees gratefully commend to prospective benefactors of this institution the phraseology of the above provision. It indicates how a donor, interested in a special department of the Library, may direct his gift to the benefit of that department by the expression of a *desire* which is certain to be respected, without imposing an absolute *restriction* which, under later conditions, may nullify the very benefit which he purposed, or prevent a larger benefit than he could have foreseen.

Books. — As the selection of books which shall suit the tastes and supply the demands of those who use the Library requires careful consideration, the difficulty of judicious purchases of nearly 30,000 books in a year is apparent, and the Trustees are pleased to know that in the opinion of the Examining Committee, expressed in their recent report, the work has been fairly successful. They endorse the policy we have adopted of uniting the "four great libraries of Boston and Cambridge and the several special libraries of Boston, to avoid unnecessary duplication" and "develop certain lines of subjects in which each should endeavor to be exhaustive." By such action the benefits of all these libraries would be enhanced and their usefulness promoted.

The recommendations of the Committee in this connection deserve careful consideration.

Bibliographies. — To the serious student nothing is of greater value than a good bibliography of the subject which engages his attention; and the officers of the cataloguing department have accordingly always devoted much time and study to the preparation of bibliographies and classified lists in various departments of literature. The work done in this direction during the past year has been peculiarly important and varied in its character, as will be seen by reference to the Librarian's report. The demand for such publications has usually furnished satisfactory evidence of the public appreciation of the value of this work, but this year one of the most interesting publications of the Library and one for which a ready sale was anticipated has remained almost uncalled for. This is the List of periodicals, newspapers, transactions and other serial publications currently received in the libraries of Boston and vicinity.

Since this volume enables the reader to ascertain at a glance where any given periodical is to be found if taken by any one of thirty-six libraries in this neighborhood, it was

supposed that it would be an indispensable work of reference on the table of every student. Yet though offered at the nominal price of twenty-five cents, not more than 146 copies have been sold. It is difficult to understand this indifference of students to such a valuable aid.

Use. — Since the Library is properly regarded as the crown of the city's educational system, it is with great pleasure that the Trustees call attention to the extensive use which has been made of its collections by classes and clubs of students as recorded in the Librarian's report. It is the desire of the Trustees to furnish every facility to teachers who thus seek to utilize the material of the Library for the purpose of systematic instruction. In this connection should also be mentioned the exhibits of library material and of loan collections which have been held from time to time during the year. The enumeration of these exhibits by the Librarian shows their varied character and their interesting nature. The educational value of such exhibitions would, of course, be greatly enhanced by explanations of the material exhibited, given by competent lecturers. One such explanatory lecture, on the Art of Ancient Greece, which has been already delivered, proved so attractive that it had to be repeated in order to accommodate all who desired to hear it.

It is obvious that this is a direction in which the work of the Library may be extended to the great advantage of the public. To facilitate the presentation of such subjects to large audiences it has been proposed to have lantern slides prepared which may, under proper restrictions, be also loaned for the illustration of lectures given outside of the Library building. The photographic room of the Library affords an excellent opportunity for the preparation of such slides without removing any of the material from the building.

The classes and audiences thus seeking instruction have been accommodated on the Special Library floor, but this portion of the building is very imperfectly adapted to the purpose. The need of small class rooms in which instruction can be given without interfering with the general readers is seriously felt, and can be only very inadequately supplied by screens or movable partitions in the large halls. The Barton-Ticknor room, in which most of the exhibits have been made, contains many of the most precious treasures of the Library, and, owing to the character of its collections, should be reserved for the use of special students. One of the fine arts rooms has therefore been recently fitted up as an exhibition room but we still lack a hall suitable for the accommodation of audiences likely to be drawn to the

explanatory lectures above alluded to. This embarrassment has arisen from the fact that when Mr. Todd's generous gift to the Library made it necessary to provide a Newspaper reading-room, no other space in the building seemed to be available for the purpose except that which in the original plan had been reserved for a lecture-room. The extensive use which is made of the Newspaper-room makes it quite impossible to think of transferring it to smaller quarters.

It is evident, therefore, that if these high educational functions of the Library are to be properly developed, additional accommodations must be provided. For these purposes as well as for the structural changes required for efficient administration, as set forth by the Librarian it seems proper that funds should be provided in the same way as for the original construction of the building. The Trustees appeal with confidence to the City Government and to the Legislature to provide the means for rendering the Library all that the citizens have a right to demand, calling attention to the fact that the changes of construction are rendered necessary by the fact that the usefulness of the Library has far exceeded the most sanguine anticipations. Had the use of the Library by the citizens remained within the limits anticipated by those who planned the building, its structural defects would not have been apparent. In spite of the great cost of the building and in spite of the fact that the administration of the Library demands a large and an annually increasing appropriation, there can be no doubt that the money thus expended must be regarded as a good pecuniary investment for the city. To say nothing of the influence of a Library like ours in preventing idleness, drunkenness and crime, and thus indirectly increasing the wealth of the city, it is interesting to note the effect which the sumptuous installation of learning has had in stimulating the generosity of the community. The gifts to the Library since the erection of the present building have equalled in value approximately one-twelfth of its entire cost.

In this connection the Trustees would say that they find it quite necessary to pursue some definite policy in regard to accepting works of art for the Library. Before we had a building of such architectural merit it was not so important to consider the artistic worth of the gifts offered to us, and their appropriateness to the atmosphere of the place; but the Trustees feel that now a just responsibility rests upon them to exercise great care in the acceptance of such gifts with all due regard to the good and generous intentions of the donors.

As works of art eminently suitable for preservation in a library may be mentioned:

1. Portraits, busts and statues of men eminent in literature, science and art, of patrons of learning, and of men prominent in the history of the country, state or city.

2. Paintings or engravings illustrative of historical events.

Works of art not belonging to either of the above classes should be received only in association with special libraries, or as completing existing art collections.

Among the most interesting gifts of books may be mentioned the entire libraries of the Browning Society and of the Numismatic Society, the latter accompanied by a gift of \$300, "for the benefit of the study of numismatics." Gifts of this sort are always welcomed by the Trustees, especially when unaccompanied by restrictions as to their use. The fact that societies are willing to intrust their highly specialized collections to the care of the city, although their members can receive no special privileges in their use, is a gratifying testimony to the confidence felt by the community in the careful administration of the Public Library.

In conclusion, the Trustees desire to call the attention of the City Government to the importance of adopting, without delay, some definite policy with reference to the treatment of Copley square. A public square around which such magnificent public and private buildings have been erected should certainly be laid out in a manner worthy of its surroundings. At present the fine architectural features of the square will fail to teach the lesson in æsthetics they are so well fitted to impart.

FREDERICK O. PRINCE,
President.

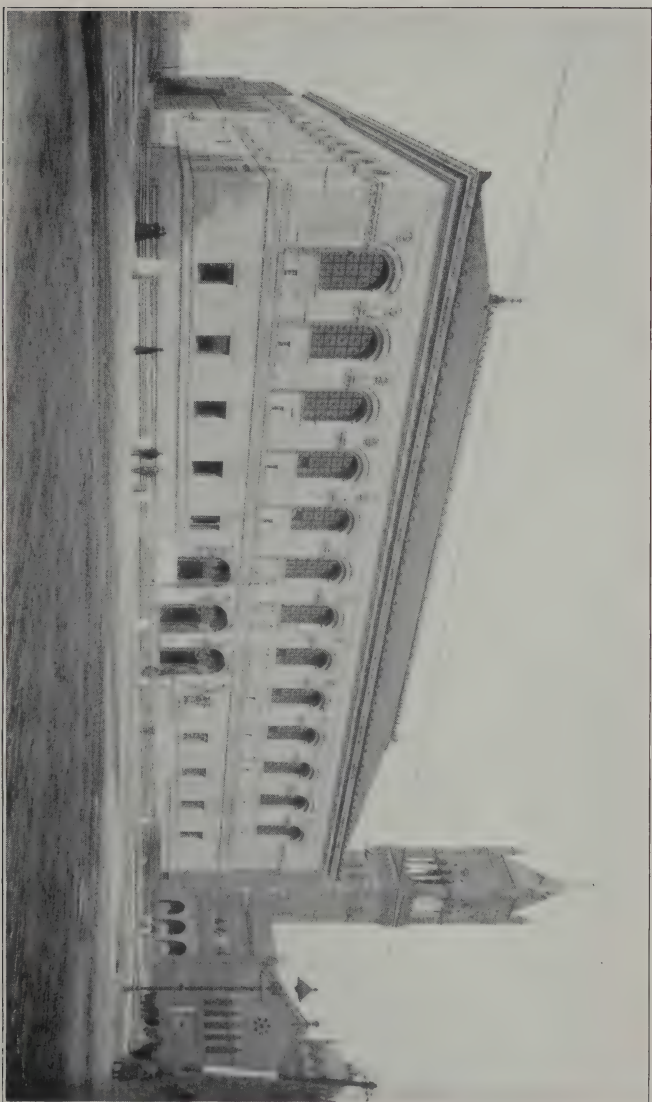
SOLOMON LINCOLN,
Vice-President.

JOSIAH H. BENTON, JR.,
HENRY P. BOWDITCH,
JAMES DE NORMANDIE.

Adopted May 13, 1898, as of February 1, 1898.

Attest:

HERBERT PUTNAM, *Clerk.*



CENTRAL LIBRARY BUILDING, COPLEY SQUARE.

LIBRARIAN'S REPORT.

To the Trustees :

I have the honor to submit my report for the year ending January 31, 1898.

During the year the library system has been augmented by the establishment of one new delivery and deposit station. The deposit feature has been extended to three of the existing delivery stations. Books have been sent on deposit from the Central Library to eight additional engine-houses, to two grammar-schools, to the House of Reformation at Rainsford Island, to the Marcella-street Home in Roxbury; and from branches to the Fleet-street Free Reading-room for Men, and the West Roxbury Parental School for Boys.

The branch system now comprises :

Ten branches, with large permanent collections of books.

Five reading-rooms, all of them delivery and deposit stations, and one, Station P, having also an independent permanent collection of books.

Twelve delivery stations, all but one having the deposit feature.

Twenty-two engine-houses receiving deposits of books.

One grammar-school regularly receiving such deposits.

Six institutions receiving such deposits.

Total, fifty-seven outlying agencies, as against forty-three such in existence February 1, 1897.

The portion of the library system directly under library administration (Central Library, Branches and Stations) is exhibited in the map which is submitted as a suggestion for the frontispiece to the forty-sixth report.

The Central Library has been open every day in the year, except June 17, July 4, September 1 (Labor Day) and December 25. On the other legal holidays (Washington's Birthday, Patriots' Day, Memorial Day and Thanksgiving Day) the Central Library was open as on Sundays, that is, from 2 until 10 P.M., in all departments directly serving the public. Of the branches, the West End has been open on Sundays during these same hours throughout the year; the Charlestown, East Boston and South Boston Branches from November 7, and the Broadway Extension Reading-room from October 10.

Statistics. — Reports for the statistical year have been submitted to me in writing by the chiefs of the several departments. One of these I quote nearly in full, others I quote in part, while others I am obliged wholly to omit as extending my own report into too great detail for publication. Many of the statistics accompanying these reports are of interest to one investigating closely the resources and operation of the Library; and the collection entire has been type-written and, as last year, will be on file for reference.

FINANCE.

The Auditor's statement (Appendix I. of this report) shows in detail the receipts and disbursements of this department during the year.

In the examination of this statement there must be borne in mind the double system of accounts necessitated by the fact that in addition to the relations which the Trustees as a city department sustain with the financial departments at City Hall they are charged as a corporation with the custody and direct expenditure of certain moneys placed in their hands for direct expenditure, and with the custody and final expenditure of the income of trust funds, and occasional reserve balances of special appropriations for books, turned over to them in bulk by the City Treasurer and placed abroad for the payment of foreign invoices upon direct draft by them. Moneys of the former class have not customarily appeared in the books of the City Treasurer, while income of trust funds and reserve balances turned over to the Trustees in bulk appear in his books as actual disbursements, while standing in the books of the Library Auditor merely as credits transferred.

The financial statements of the Library Auditor must agree with those of the City Collector, City Auditor and City Treasurer, so far as their scope is the same; but they must also exhibit certain transactions which do not appear in the books of the City Collector, City Auditor or City Treasurer. With this necessity in view the form which they adopt will, I think, be easily intelligible.

In the figures quoted by me in my last report (pp. 15-18), from the Auditor's exhibit for 1896, there were, it appears, several misprints. These were repeated in the report of the Trustees (pp. 6-8). If any comparison is to be instituted between the accounts of 1896 and the accounts of 1897, not the figures given on the above pages of the 1896 report, but the figures in the Auditor's exhibit itself, constituting Appendix I. of that report, should be referred to.

INCOME: GENERAL SOURCES.

The following figures, drawn from the Auditor's statement, indicate income from general sources applicable to maintenance and purchase of books:—

General appropriation for 1897	\$235,000 00
Miscellaneous income, to wit: receipts from fines, sales of library publications, rentals of old library building, exchange accounts, interest, and balances from 1896	26,498 24
	\$261,498 24

EXPENDITURES: FROM GENERAL INCOME.

General Appropriation.—In addition to the detailed statement of expenditures for the past year, Appendix I. gives a comparative exhibit of the expenditures of this with the years 1895 and 1896, distributed under the several accounts. This shows that the expenditures met by the general appropriation, supplemented by the revenue from the old building and receipts from fines and sales, were, in 1897, \$246,541.79 as against \$231,525.33 in 1896.

The cost of maintaining the branches and stations is included in the above figures. In 1896 this was \$62,785.39; in 1897, owing chiefly to a decreased expenditure for books, it was \$58,282.49.

TRUST FUNDS.

Endowments.—The endowments have been increased during the year by the receipt of the following principal sums:

From the Papyrus Club (J. Boyle O'Reilly Fund)	\$1,000 00
From the Twentieth Regiment Association (Memorial Fund)	5,000 00
From William C. Todd (Newspaper Fund)	50,000 00
From the estate of the late Caleb D. Bradlee (bequest)	1,000 00
	\$57,000 00

The total of endowments is now \$267,350, of which all save the sum of \$1,000, representing the Bradlee bequest, is under investment.

Besides endowments certain sums have been received by way of gift for direct expenditure, as follows:

From Twentieth Regiment Association . . .	\$775 03
From Boston Numismatic Society . . .	300 00
From Mrs. John A. Lewis	26 00
From sundry sources for the purchase of photographs	1,321 00
	\$2,422 03
To which add balances February 1, 1897 . .	25 37
	\$2,447 40

the application of which appears in detail in the Auditor's exhibit.

Income. — The income account with trust funds stands as follows, including balance, \$2,950.10, of Todd Fund as income :

Balance on hand February 1, 1897. (<i>See Report 1896, p. 75</i>)	\$17,051 82
Additional credit, Todd Fund	3 00
Received, February 1, 1897—January 31, 1898,	13,755 21
	\$30,810 03
Less over-expenditure of certain funds in previous years	246 00
	\$30,564 03

<i>Expenditures.</i> — There has been expended from income of trust funds for the purchase of books and newspapers	10,757 80
From miscellaneous gifts:	
For books	448 03
For photographs	1,235 79
For special service	368 00
	\$12,809 62

GROSS INCOME AND EXPENDITURE.

Gross Income. — The gross income of the Library from all sources, including balances February 1, 1897, except special appropriations was as follows :

General appropriation	\$235,000 00
Rentals from old library building	10,874 05
Receipts from fines and sales of catalogues .	5,624 63
<i>Carried forward</i>	\$251,498 68

<i>Brought forward</i>	\$251,498	68
Trust funds: income received from City Treasurer	¹ 13,876	21
Miscellaneous donations for purchase of books, newspapers and photographs, including balance of Todd Fund	5,400	50
Exchange account	1,088	62
Interest on bank deposit	1,488	25
London accounts: Balances February 1, 1897, as follows: ²		
Trust funds	\$14,053	47
General book funds	7,242	96
Interest on above	489	39
	<u>21,785</u>	82
	\$295,138	08
<i>Expenditure.</i> —From general income (as above)	\$246,541	79
From exchange account	52	20
From trust fund income ³	\$10,757	80
Less credited to general fund on adjustment	306	96
	<u>10,450</u>	84
From miscellaneous gifts	2,051	82
	<u>\$259,096</u>	65

A nominal balance on February 1, 1898, would appear as \$36,041.43. This is, however, subject to outstanding obligations and in part to special restrictions. The available balance is but \$25,285.16, made up as follows:

Applicable to general purposes	\$356	89
Applicable to newspapers (Todd Fund)	310	04
Applicable to photographs	85	21
Applicable to books, as follows:		
Trust funds income: nominal balance, ...	\$19,568	94
Less outstanding orders and necessary reserve for continuations	7,530	40
	<u>\$12,038</u>	54
<i>Carried forward</i>	\$12,038	54
	<u>\$752</u>	14

¹ The actual income for the year was but \$9,399.21.

² Figures from p. 70 of 1896 Report slightly modified on adjustment.

³ Including also balance Todd Fund.

<i>Brought forward</i> . . .	\$12,038 54	\$752 14
General Funds . . .	\$12,573 92	
Less outstanding orders . . .	3,535 91	
		9,038 01
Exchange account . . .	1,036 42	
Interest: domestic account . . .	1,488 25	
Interest: foreign account . . .	311 39	
Cash donations: balances on hand	620 41	
		24,533 02
		\$25,285 16

It is to be observed further that the bulk of the above available balance is composed of funds applicable only to the purchase of books, and to a great extent of funds which must be reserved for the purchase of books of a very special character, *e.g.*, the Charlotte Harris Fund — balance \$4,888.21 — restricted to the purchase of books published prior to 1850.

SPECIAL APPROPRIATIONS.

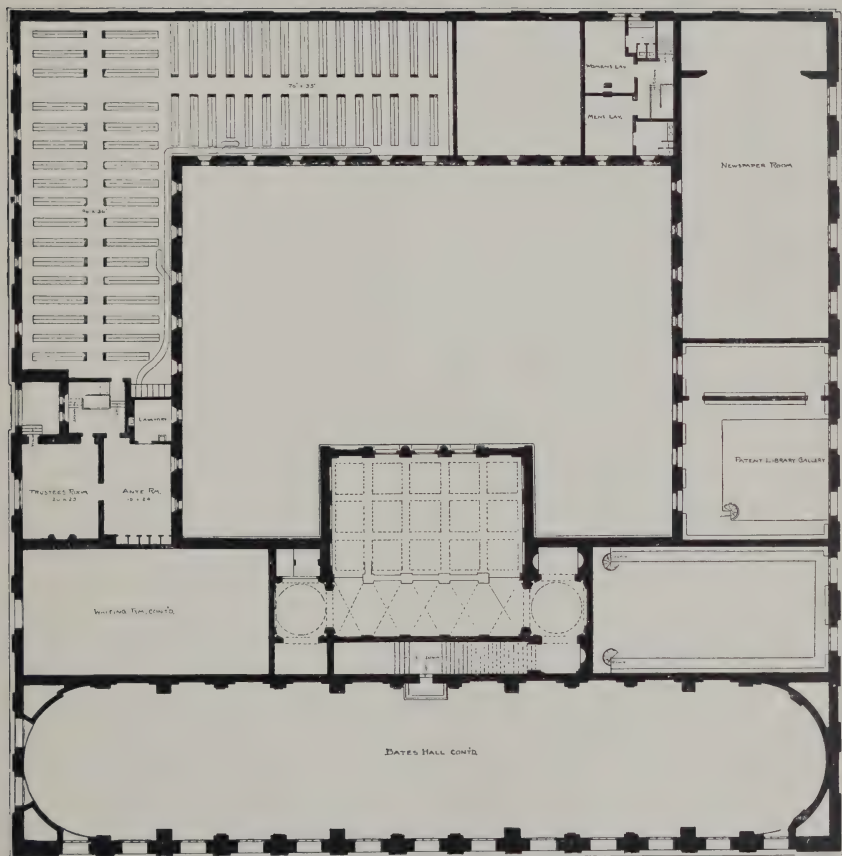
These with apparent existing balances are the Building appropriation (construction of Copley Square building), Furnishing appropriation (Copley Square building) and the appropriation for Improvement of the Broadway Extension Delivery Station. The Auditor's exhibit shows:

<i>Building Appropriation.</i> — Nominal balance	
uncertified February 1, 1897	\$89,481 17
Expenditures, 1897	13,050 55
Nominal balance	\$76,430 62
Against which are contracts amounting to	\$82,000 00
And claims amounting to	8,685 61
Total obligations	\$90,685 61
Indicating a deficit of	\$14,254 99

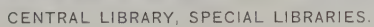
<i>Furnishing Appropriation.</i> — Balance February, 1897	\$24,539 96
Expenditures, 1897	8,809 35
Nominal balance	\$15,730 61
which with amounts reimbursed from the Building Appro-	



CENTRAL LIBRARY, BATES HALL.



CENTRAL LIBRARY. ENTRESOL B.



CENTRAL LIBRARY, SPECIAL LIBRARIES.

priation, if reimbursed, is likely to be fully exhausted by work either already contracted for or projected, and by amounts due to the general appropriation.

Broadway Extension Improvement. — Approp-

priation made June, 1897	\$5,000 00
Expenditures, 1897	1,010 44
Balance	<u>\$3,989 56</u>

BUILDINGS AND EQUIPMENT.

CENTRAL LIBRARY.

An entirely new hoisting machine for the passenger elevator has been substituted for the one originally installed and found imperfect in operation. The roof of the arcade has been relaid with a coating of slate to remedy the leaks which had given much concern, causing defacement, if not more serious injury. The expense of this was \$1,800, of which the Library itself bore one-third. This amount, with the cost of the new hoisting machine (\$1,200), had to be advanced out of the general appropriation for 1897.

Various improvements, properly chargeable to construction, have been under contemplation during the past year. These have included additions to the system of heating and ventilation; a service elevator; a system of intercommunication between the stacks; enlargement of the space for the issue of books; adaptation of other space for administrative uses; the construction in the Newspaper-room of a gallery or mezzanine floor to accommodate the patent collection, freeing the present Patent-room for a Children's room; the equipment for immediate use of space on the rear wing and in the basement which had been assumed to be unnecessary for use for some time to come; and miscellaneous work about the building, including work upon the terrazzo floors.

For the most important of the above improvements plans have been drawn and estimates secured. The various applications for an appropriation of \$100,000 with which to carry them out have not yet (February 1, 1898) met with success.

In the meantime the only addition to the general facilities that has been possible has been the construction in the basement of cheap shelving for such of the files of bound newspapers as could not find place in the upper room. To render this space habitable for this material, steam-pipes had to be run through it to offset the natural dampness.

The attractiveness and serviceability of the Children's and Delivery rooms have been added to by chandeliers, and of the domed rooms on the upper floor by an adequate array of electric lights circling the domes.

As to the works of art, which have added to the embellishment of the rooms at the Central Library, I report in detail under "*Gifts.*"

BRANCHES.

I shall this year append to my report the annual report, almost entire, of the Supervisor of Branches, and refer to it for a statement explicit as to the condition and equipment of our outlying system, and accurate as to its operation.

The only special resource for permanent improvements in this system has been the special appropriation of \$5,000, for the Broadway Extension Station. This appropriation was not specifically requested by the Library Department; but as it would increase facilities for a work of great moment in a district ill provided, it could not well be rejected. The station was moved to a larger room, more prominently located, and was effectively and attractively equipped with furniture and with books. The result has been a greatly increased use and the development of an important use of a new character.

But the special appropriation, being only for "permanent improvements," could not be used for rent or service. The increase in these has had to be borne by the general appropriation, without, however, any corresponding increase therein for this purpose. As a result of the special appropriation therefore, and in order to utilize it, we have had to throw upon our maintenance account an additional burden which each year will reach six or seven hundred dollars.

Whenever, therefore, an appropriation for "improvements" is under consideration, it is to be borne in mind that each such increase of facilities calls for an increased outlay in maintenance, and this out of funds already overpressed.

The effort to secure better accommodations for the East Boston Branch has continued and become defined during the year. In June last a mass meeting was held under the auspices of the East Boston Citizens' Association, at which one of the Trustees of the Library, Mr. Whitney, as Acting Librarian, and the Supervisor of Branches, assisted. A committee was appointed, with Dr. William H. Ensworth as chairman, which has worked actively ever since in aid of the project. Several hearings have been had before the Mayor, and petitions representing a large and important public sentiment presented to the City Council. An order for the

appropriation of \$100,000 for the purchase of land and erection and equipment of a building has been introduced into the City Council, and may this year receive attention.

Certain other directions, in which permanent improvements in the outlying system are desirable if, and when, funds can be provided, were mentioned in a communication addressed by your Board to the Mayor, which though subsequent to the nominal date of this report may fitly be quoted here:

“The Branch Library at Charlestown is inadequately provided for in unsuitable rooms over a police station; that at South Boston is in rooms whose rent costs the city \$2,500 per year—the equivalent of 3 per cent. on a principal sum of \$88,000; that at the South End is retaining with difficulty rooms in the High School building, inadequate in themselves and urgently demanded for school uses; that at West Roxbury is in a building which should be remodelled for its accommodation according to the plans prepared by the Public Buildings Department at your request. A branch reading-room and delivery station is urgently desired in Ward 17, and miscellaneous improvements of a minor character are needed at the various other existing branches.”

Various orders introduced into the City Council touching this department, and for the most part suggesting improvements in the outlying system, are quoted in Appendix XIV.

WORKS OF ART.

Among the works of art received as gifts and placed during the year have been the following:

Paintings by Howard Pyle.—Nineteen oil paintings, by Howard Pyle, of colonial subjects or episodes in colonial history, particularly of scenes in the life of Washington, were subscribed for by various citizens of Boston and given to the Library in April last. The list of the donors is given in full in Appendix XIII. These paintings have from their historical accuracy a value to the Library auxiliary to its main purpose, which might be lacking in an ordinary work of art. They have been hung in the Children's room, but have as yet neither suitable frames nor escutcheons.

Franklin.—The bust of Benjamin Franklin, once attributed to Horatio Greenough, but by the donor thought to be the work of Ceracchi, was given by Mr. Frank Wood of Boston.

O'Reilly.—The bust of John Boyle O'Reilly, for which a special appropriation was made by the City Council in 1894, was ordered last spring of John Donahue. It was received, approved by the Art Commission, and accepted before the end of the year. It lacks still a pedestal, as does the Holmes

bust, also ordered by the City Council. The need of a provision for pedestals in such cases was communicated by your Board to the Mayor on February 12 last.

Powers's Greek Slave.—A marble copy of the bust of Powers's Greek Slave was received as a gift from Mrs. Margaret S. Otis. It has been aptly placed in the Fine Art Department.

Cabot Portrait.—An excellent portrait of Edward C. Cabot, first president of the Boston Society of Architects, has been hung in the room occupied by the Department of Architecture. It is not a gift, but was received on deposit from the society.

Bronze Doors.—In August last sketches were approved by the Board for the bronze doors for the main vestibule, to be furnished by Mr. Daniel C. French.

Bacchante.—The group of dancing nymph and child, offered by Mr. Charles F. McKim for the fountain of the courtyard, was at his request returned to him in June last. It is now placed in the Metropolitan Museum at New York.

BOOKS.

Appendices II.—V. give the extent of the Library by years, a summary of the contents of the Library on January 31, 1898, the net increase of the several departments during the past ten years, and the classification of the material in the Central Library and branches on January 31, 1898.

According to last year's report it appears that the number of volumes in the Central Library and branches on January 31, 1897, was 663,763, of which 492,901 were in the Central Library. By the tables appended to this report it appears that on January 31, 1898, the number in all departments is 698,888, of which 528,079 are in the Central Library. The net increase is thus 35,129 volumes.¹ Thirty-five thousand one hundred and eighty-two volumes have been added to the Central Library; and a net loss, through transfer, of 53 volumes is chargeable to the branches. A large portion of the increase in the central collection, as appears by Appendix III., is, however, due to accessions to the Duplicate-room, from the branches and elsewhere.

The total expenditure for books and periodicals during the past year was \$40,351.62 as against \$40,430.23 in 1896. This amount does not include \$480.10 paid for books out of the special appropriation for Delivery P (Broadway Extension) nor \$410.29 expended by the Fellowes' Athenæum for books for the Roxbury Branch.

¹ An error of four volumes carried over from previous reports has here been corrected.

The expenditure was distributed as follows :

City money expended for books :

For Central Library (including Deposit Collection) . . .	\$20,497 84	
For branches	5,303 28	
		\$25,801 12

Trust funds expended for books :

For Central Library		8,114 74
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City money expended for periodicals :		\$33,915 86
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For Central Library	\$4,766 87	
For branches	1,668 89	
		6,435 76

\$40,351 62

As stated in my last report, in a comparison of expenditures with statistics of additions, the number of *accessions* rather than the number of books actually located, should be considered. The accessions during the past year, excluding mere transfers from one department to another, have been as follows :

	Volumes.	Volumes.	Volumes.
Added by purchase	Central Library, 18,099	Branches, 6,030	Total, 24,129
Added by gift	Central Library, 8,792	Branches, 210	Total, 9,002
	26,891	6,240	33,131

Purchases. — Purchases along the ordinary lines have maintained their usual proportions. In addition during the past year there have been certain purchases in group which have a special significance.

In a library of this sort, such purchases may find their occasion: (1) in the sudden availability of some new fund for purchase; (2) in some special sale bringing to the surface unusual material; (3) in the compilation of some bibliography which involves a close investigation of the resources of the Library in a particular direction and suggests gaps to be filled; (4) in replenishment of the shelves to make good some existing subject catalogue, or (5) in the recommendation of some specialist, who in connection with his own use of the Library, or perhaps simply out of a generous desire for the advancement of the institution, lends his advice as to the development of the department as to which he is expert.

During the past year all of the above influences have contributed to a rather unusual group of special purchases.

1. *Longfellow Memorial Collection.* — The Artz Fund has enabled a beginning to be made of the Longfellow Memorial collection, through the purchase of about 400 volumes of early American literature, principally first editions of the poets. It is believed that nearly every American edition of the works of Longfellow, Lowell, Holmes and Whittier has been secured. The first year of the availability of this fund has happily coincided with opportunities particularly favorable in the way of auction sales.

2. *Mexico.* — The private sale of the library of the late Julio Zárate led to the acquisition of a number of unusual books on Mexican history, topography and literature.

3. *Australia and Polynesia.* — A special sale catalogue induced the purchase of a number of works on the exploration and early history of Australia and Polynesia, among them Admiral Lütke's "Voyage autour du monde," with its atlas of fine plates; Captain Dillon's account of his adventures among the Fiji cannibals, and Vason's "Tongataboo."

In the selection of material of this class the Library has recently had within its direct service expert judgment in the association with the force of Mr. John Murdoch. Mr. Murdoch's recommendations have induced the purchase of a great number of miscellaneous works of early exploration on the ground that they embody the only records at first hand of racial characteristics and customs of peoples now fast disappearing. An important accession (this, however, of a comparatively recent expedition, but to little known regions) has been the report of the Horn Scientific Expedition to Central Australia published in 1896, in four volumes.

4. *Anthropology.* — The proposed publication by the Library (see *infra*) of the "Bibliography of the geographical anthropology of Europe," compiled by Prof. Wm. Z. Ripley, has induced the purchase of nearly 300 volumes recommended by him as necessary to round out the literature of the library on this subject. Among them are the following important serials: "Archivio per l'antropologia e la etnologia," Florence 1871-97 and "Beiträge zur Anthropologie und Urgeschichte Bayerns," Munich 1877-97.

5. *English Prose Fiction.* — Much complaint on the part of the public of failure to get works of standard English prose fiction listed in the subject catalogue issued in 1893, and a decision against the revision of the catalogue, induced the purchase of over 4,000 volumes of English prose fiction as replacements and additional copies, to replenish the shelves and make good the catalogue as it stands.

The purchase of current English fiction, on the other hand, has been as conservative as last year. One hundred and

seventy-eight titles have been selected out of 587 books read. But copies have been multiplied so that the total of volumes purchased of this class has reached 2,566, representing an expenditure of some \$2,274.

6. *Psychology*. — The purchases have included 150 volumes recommended to the Library by Prof. William James as the most important contributions to the subject within the past two and a half years.

Slavic. — The purchases of Russian and Polish literature in the original have included nearly 400 volumes recommended by Prof. Leo Wiener and by Mr. Joseph Adamowski.

Scandinavian. — If there be added to the above the special purchase of some 400 volumes of standard Norwegian, Swedish and Danish literature, the first large accession of its kind, and the various works French, German and Italian history and miscellanies, secured upon recommendation of Mr. Thomas Sergeant Perry and others, it will appear, I think, that the literature of the continent has had especial recognition during the past year.

American Patents. — A close investigation of our patent collection, undertaken last summer, proved United States drawings and specifications to the number of 97,938, all prior to 1869, to be lacking. The list price of these would be five cents (formerly ten cents) per copy. But under a recent act of Congress, suggested, I think, by the application of this Library for a reduction in price where a large number are subscribed for *en bloc*, the Commissioner was enabled to fix a price of one cent per copy. In September last we remitted to him the sum of \$1,000 to cover the above 97,938. The lacking copies are therefore gradually being supplied to us.

Kelmscott Press. — Among the important accessions by purchase during the past year should be mentioned also eleven issues of the Kelmscott Press (including the Froissart, the Beowulf, the Sir Perecyvelle, and the Histories of Troye); and in connection with them Vallance's notable work on the "Art of William Morris." Nor should there be overlooked among the examples of sumptuous book-making the "Altar book," issued by D. B. Updike of Boston.

Deposit Collection. — The extension of the system of deposit stations has involved the selection and purchase of a collection of books to be devoted exclusively to this service. This collection has gradually grown until it now numbers 5,041 volumes. In the enumeration, these books are credited to the Central Library; but as they are used solely through the outlying system they should really be reckoned as part of the equipment of the latter.

Photographs. — As to the photographs, which have formed a special feature of our purchases during the past year, I report in a later paragraph under "Gifts."

GIFTS.

Works of Art. (See *supra*.)

Endowments. — The endowments of the Library have been increased by the following very important contributions:

April, 1897. — From the Twentieth Regiment Association Massachusetts Volunteer Infantry the sum of \$5,000, the income to be used "for the purchase of books of a military and patriotic character, to be placed in the alcove appropriated as a memorial of the Twentieth Regiment"; that is to say, with the collection to be known as the Twentieth Regiment Memorial collection, the exact location of the collection being subject to possible change.

A beginning has already been made with this collection by the purchase of miscellaneous books relating to the Civil war. It is proposed as little as possible to duplicate material already in the general library.

May, 1897. — From the Papyrus Club of Boston the sum \$1,000, to be known as the John Boyle O'Reilly Memorial Fund, the income to be used "for the purchase of books." With the gift, the Papyrus Club supplies an appropriate book-plate, which will be inserted in each of the volumes.

October, 1897. — From William C. Todd, Esq., of Atkinson, N. H., the sum of \$50,000 as an endowment for the Newspaper reading room. This gift is made in pursuance of the intention communicated by Mr. Todd, June 16, 1893, in connection with his proposal to provide, temporarily, each year the sum of \$2,000 for direct expenditure for this purpose; but the offer in its final form, October 21, 1897, was addressed, not to the Trustees but the City Government; and it was an offer to pay over to the City of Boston the sum of \$50,000 on an agreement by the city not merely to hold and invest this sum and use the income for the purchase of current newspapers, but on the further agreement, should the income in any year fall below \$2,000, that there should be appropriated the amount necessary to make the income up to \$2,000, for the above purposes. (See letter of gift in appendix.) These conditions were accepted by the city government and ensure the application of \$2,000 yearly, *in perpetuum*, for the supply of this department.

November, 1897. — From the estate of the late Caleb D. Bradlee, D.D., of Brookline, the sum of \$1,000, a bequest to the Library without condition or restriction.

Mention is appropriate here of the bequest contained in the will of the late John C. Paige of Boston, the full terms of which are given in the appendix. It is a residuary bequest, postponed to a life interest; and its exact amount cannot of course now be stated. But its terms are so liberal, and yet the suggestion that accompanies it, that it be used so far as practicable for the benefit of the children, is of such interest that it should take a foremost place among the benefits of the year. Mr. Paige died on May 8, 1897. His will is dated January 28, 1897.

Miscellaneous gifts of money for direct expenditure in books have been:

From the Twentieth Regiment Association, for books for the Memorial collection, in addition to \$368 for service, the sum of . . .	\$407 03
From Mrs. John A. Lewis for two volumes to be added to the John A. Lewis collection . . .	26 00
From the Boston Numismatic Society, in connection with the society's gift of its library (<i>see infra</i>) "for the benefit of the study of numismatics."	300 00

Photograph Fund.—The usefulness of the Graupner collection of photographs given to the library last year suggested how large a service might be effected by a collection more widely representative of the various schools of painting, and which would include also other departments of art, and the more noted monuments of architecture. The advantages of direct purchase abroad of such material being obvious, an appeal was made to the public of Boston, prior to my departure for Europe in May last, for contributions towards such a purchase. The response was cordial in terms and considerable in amount. The full list of donors appears in the appendix. Two hundred and fifty dollars, as will be noticed, was voted by the Boston Society of Architects, an action implying an indorsement which was in itself of value, and \$200 came from a class of young women pursuing the systematic study of the fine arts. There was even a brave little contribution from the pupils of a grammar-school class, whose enthusiasm had been stirred by the use of the art books, and who were determined "to do something."

The total amount subscribed was \$1,321.

The purchases were made in Italy, of Messrs. Anderson at Rome, and Alinari and Brogi at Florence; in London, of Messrs. Clarke & Davies, Mansell Hollyer, and Hanfstaengel, a Munich firm. What I took with me by way of lists

were, as regards paintings, *affirmative* lists of necessary examples lacking in the Graupner collection. This list was compiled by Mr. Allen A. French of Boston, whose expert service in this matter has laid the Library under great obligation. As regards sculpture and architecture, it was more convenient and sufficiently explicit to take lists of what the Library already possessed. The classic and the Tuscan sculptors were for the most part already reasonably available in the works of Brunn & Bode, which, although in book form, might temporarily be utilized. But the important collections in the British Museum are not included in these, and of Italian sculpture, outside of the Tuscan masters, the Library had nothing.

The photographs purchased were unmounted, and for the most part silver prints and small in size (8 by 10 inches). They included, however, a considerable number of "carbons," and a large selection of the fine Hollyer platinotypes of the works of Burne-Jones, Watts, Rossetti and others of the English Pre-Raphaelite school. They included practically the entire Assyrian and Egyptian, Greek and Roman series of sculpture in the British Museum, listed in Mansell's Catalogue. The lists compiled by Mr. French were purchased entire. They comprised some 1,600 examples of the Italian masters in northern, as well as in Italian galleries.

The total purchases to February 1 out of the \$1,321 subscribed reached 6,765 photographs; \$85.21 remains still on hand to meet outstanding orders. Other orders outstanding will be met out of library funds otherwise available.

The work of mounting the photographs has been done at the Library by special contract. The expense for the 6,765 thus far received has been \$579, all of which has been met by the Library. As fast as they are mounted they are classified, numbered and located in the case recently constructed for their reception.

The entire collection of photographs owned by the Library and in active use now numbers over 9,000. Auxiliary to this collection is the collection gradually forming of process reproductions, which coming to us in serial form are mounted and made available for classification under subject. The serials, without text, that are now dissected for this purpose include the *Matériaux et documents d'architecture et de sculpture* (Raguenet), *Formenschatz, Blätter für Kunstgewerbe*, *Architecture et sculpture en France*, *L'art pour tous*, *Portefeuille des arts décoratifs*, and *Portafoglio delle arti decorative in Italia*.

The usefulness of all this material when properly classified and conveniently accessible, the service which it may ren-

der to the individual student of the fine arts or industrial arts, or of history or institutions, or to the class under trained guidance, or as the basis of occasional exhibits that reach a larger general public can be fully appreciated only by close observation of such a department in operation day after day. The obvious and proved service with even the present collection is already so great that we are anxious to enlarge its scope.

What should next be added are: (1) Examples of the northern and of the Spanish schools of painting and of architecture, and (2) examples of the remains of Greek art and architecture now in Greece itself.

In the meantime the donors to this project, will, it is hoped, feel that their contributions have been used to good purpose.

Gifts of Books. — The number of givers of books has increased from 1,545 in 1896, to 1,776 during the past year. The full list of givers appears as usual in Appendix XIII. But certain of the gifts have been so important in themselves and so significant in the interest which they indicate, that I insert fuller mention of them here.

Two notable accessions represent the entire libraries of certain Boston societies organized for study in a special direction, and amassing a collection of books as incidental to this purpose. The one of these is the Boston Browning Society, the other the Numismatic Society. The inducement to the transfer of these collections to the Public Library was doubtless the conviction that they would be safe and well cared for here and do a service to a larger public without any essential deprivation of service to their original owners. This is a view which the Library greatly welcomes and trusts may generally prevail. It is especially applicable when the collection in question is highly specialized upon a single subject.

Some of the important gifts of the year I note here. They are arranged alphabetically according to their donors.

GIFTS OF ESPECIAL IMPORTANCE, 1897-98.

From Michael Anagnos, Esq., Director of the Perkins Institution for the Blind, South Boston, twenty-seven volumes in embossed type, nineteen of which have been recently published. These include Don Quixote, Hamlet, The Merchant of Venice, and Fiske's War of independence, and supplement the collection of over 500 volumes for the use of the blind, a great part of which was placed here through the kindness of Mr. Anagnos.

From the Boston Browning Society, its library, numbering 291 volumes, "without conditions further than are implied by the expressed wish that it be kept together as a reference collection so long as the well-being of the Public Library itself permits, and that it be made accessible under the same rules that the Public Library maintains in the case of other similar collections." (Letter of gift.) This collection is notably rich in rare editions of the works of both Robert and Elizabeth Browning, and contains, besides these, a large number of critical and illustrative works relating wholly or in part to the Brownings. Among the single works of Robert Browning are the following first editions: Paracelsus, 1835; Strafford, 1837; Sordello, 1840; Bells and pomegranates, Nos. 1-8, 1841-46; and among those of Elizabeth Browning, "The Seraphim, and other poems," 1838; "Aurora Leigh," 1857, and "Casa Guidi windows," 1851. There is also a slender volume bearing the title "Two poems by Elizabeth Barrett Browning and Robert Browning" (first edition), London, 1854; some eighteen poems by Browning, set to music; a series of photographs and engravings of the Brownings, which is of much interest, and a bronze cast of their clasped right hands by Harriet Hosmer. The members of the Browning Society have expressed their intention of enlarging this collection from time to time by the gift of the additional material which they are constantly collecting.

From the Boston Numismatic Society, through its Secretary, William S. Appleton, Esq., "its collection of books and pamphlets, and also the sum of \$300 for the benefit of the study of numismatics, with no other conditions." (Letter of gift.) The collection numbers sixty bound volumes and 150 pamphlets, largely general and special histories and catalogues of the medals and coins of various countries. Among the noteworthy older works may be mentioned "Historische Remarques der neuesten Sachen in Europa," 1699-1706, in nine volumes, which gives a general history of the coinage of Europe; Tentzel's *Monatliche Unterredungen einiger guten Freunde von allerhand Büchern*, in ten volumes, 1690-1697, which devotes considerable space to the history of numismatics; *Medalische historie der Republyk van Holland*, by Bizot, Amsterdam, 1690; and Vaillant's *Numismata imperatorum Romanorum*, Paris, 1694."

From Allen A. Brown, Esq., 343 volumes for the collection of music, consisting of scores, operas and chamber music. Among these is an almost complete set of the orchestral works of Richard Strauss, and the rare full score of Saint-Saëns's *Samson et Dalila*.

From Heman W. Chaplin, Esq., Dedham, Mass., 205 volumes (two gifts) consisting principally of the works of New England theologians, biography and early school books.

From the Church of the Unity, a set, complete in seventeen volumes, of "Unity pulpit," the sermons preached in Boston by Rev. M. J. Savage, D.D. This set, which formerly belonged to the church, was presented to the Library for preservation by the Standing Committee, through Alfred Ewer, Treasurer.

From Miss Lilian Freeman Clarke, Jamaica Plain, Mass., 125 volumes and 559 pamphlets, comprising many United States documents and reports, library publications, theology and biography.

From J. Templeman Coolidge, Esq., an album containing the portraits of prominent characters at the time of the French Commune of 1870, and fifteen photographs of views of Paris after the siege, 1870.

From Messrs. Copeland and Day, thirty-two volumes of their current publications, in continuance of their practice of giving to the Library a copy of every book issued by them.

From the Commission for directing geological and geographical investigations in Greenland, at Copenhagen, a nearly complete series of "Meddelelser om Grønland," a valuable Danish government publication, embodying the results of all the Danish scientific researches made in Greenland.

From Maj. Gen. John Watts de Peyster, Tivoli, New York, sixteen volumes of his writings, relating principally to the Waterloo campaign.

From the Imperial University of Dorpat, Russia, fifteen dissertations on anthropology and ethnology, given in response to a request by the Library for material to be used in the list of books on these subjects, compiled by Prof. W. Z. Ripley, and to be published by the Library.

From the German Patent Office (Kaiserliches Patentamt), Berlin, 5,517 numbers of the "Patentschrift," continuing the file of German patents, which have been sent gratuitously to this Library by the German Government since 1892.

From Dr. D. D. Gilbert, Roxbury, thirty-four volumes, including a biographical dictionary in twelve volumes, Dr. Grew's "Cosmologia sacra," and the Laws of Massachusetts, folio edition, 1789.

From Miss Matilda Goddard, a fine copy of Binion's "Egypt" in two folio volumes, and twenty-two volumes of "Current and passing events," educational, scientific and national, made up of newspaper cuttings.

From the children of the late Dr. Benjamin Apthorp Gould of Cambridge, Mass., "without conditions or restrictions," 4,105 volumes, consisting mainly of scientific material relating to meteorology, astronomy and physics, especially concerning the Argentine Republic. Dr. Gould was evidently the recipient of many monographs on scientific subjects, the issues of various institutions and academies, which do not find their way into ordinary channels; and these form a considerable part of the gift, which includes also the Annals of the Argentine Scientific Society (*Sociedad científica Argentina*) in fifty volumes; the Annals of the Meteorological Office of the Argentine Republic (*Oficina meteorológica Argentina*) in fifty volumes, and the Meteorological year-book of the Netherlands (*Nederlandsch Meteorologisch Jaarboek*) in twenty volumes. The gift as a whole is a distinct reënforcement to the Library, in a department of literature which it is hoped to develop systematically.

From the Commissioner of Patents of Great Britain, 222 volumes, continuing the set of British patents, which exists unbroken upon the Library shelves from 1617 to the present time.

From Augustus Hemenway, Esq., a very interesting copy of *Bergomensis* (Jacobus Philippus Foresti) "*Nouissime historiarum omnium repercussiones*," printed in Venice, 1502-1506. The book was purchased by Mr. Hemenway as a specimen of artistic binding, from a collection on exhibition in this city last spring. The binding is a copy or adaptation of one executed by a Dutch artisan for Diane de Poitiers and consists of oak boards covered with calf and inlaid in colors in a pattern of geometrical design, with a monogram, a crown, interlaced crescents and the fleur-de-lis.

From Col. Thomas Wentworth Higginson, forty-two volumes for the *Galatea* collection, also three manuscript letters of George Ticknor to Mr. Stephen Higginson and Mrs. Higginson, written from Europe in 1816.

From His Majesty the King of Italy, two volumes, continuing the military campaigns of Prince Eugene ("*Campagne del Principe Eugenio di Savoia*").

From the Minister of Agriculture, Industry, and Commerce, Italy, 177 volumes of most important statistical reports, relating to the industries, commerce, railroads, education, finance, posts and telegraphs of Italy. These various reports consist for the most part of material new to the Library, although some continue files which had lapsed for many years. They were obtained through the courtesy of

the Minister of Agriculture in response to a request made personally by the Librarian while in Rome.

From Dr. B. Joy Jeffries, sixty-two volumes, chiefly medical works (made up of three gifts), and two hundred and fifteen numbers.

From George B. Knapp, Esq., 103 volumes (2 gifts) of history, biography and travel.

From His Holiness Pope Leo XIII., the ninth volume of the folio edition of the works of Saint Thomas Aquinas ("Opera omnia iussu impensaque Leonis XIII., P. M.") of which the previous volumes were received in 1895 and 1896.

From Hugh J. Leonard, Esq., New York City, the edition de luxe of his "Handbook of wrestling" published in 1897.

From a special donation given by Mrs. John A. Lewis there was purchased for the Lewis Collection a copy of Increase Mather's "Solemn advice to young men," printed in Boston in 1695, also the second part of the "New-England Magazine of knowledge and pleasure. By various authors. Printed and sold by Benjamin Mecom in Boston." (1758), and of which the Lewis collection already contained Part 1.

From the Duc de Loubat, through George H. Baker, Esq., Librarian of Columbia College, "Galerie américaine du Musée d'ethnographie du Trocadéro," by E. T. J. Hamy, a magnificent representation on folio plates, with explanatory notes, of the American antiquities and ethnology contained in the Museum.

From George R. R. Rivers, Esq., Milton, Mass., 207 volumes. This gift from Mr. Rivers contains the important set of Buffon's "Histoire naturelle," in 111 volumes, in the edition of 1798-1808.

From Richard S. Simonds, Esq., the "Gaceta de Madrid," a daily newspaper, published at Madrid from 1877-1893, in sixty-two bound folio volumes.

From Theodore Stanton, Esq., Paris, France, seventeen volumes relating to the history of woman, for the Galatea collection. Many of these are of especial interest as being from the library of Mrs. Elizabeth Cady Stanton.

From Dr. Franklin Bache Stephenson, U.S.N., Charlestown, 248 volumes of biography, theology, school books, and fourteen volumes of Dwight's "Journal of music"; also forty-four broadsides and one map.

From C. A. M. Taber, Esq., of Wakefield, Mass., a Manuscript letter-book of John Rowe, 1759-62, containing the correspondence of a Boston merchant with his ship-masters.

From William C. Todd, Esq., of Atkinson, N. H., a file of the London "Times" from 1809 to the present day in 232 volumes. The importance of this gift can hardly be overestimated. It is an acquisition of which the Library may be justly proud, and although lacking the first twenty years (the "Times" was begun under that name in 1788) the set covers the important period of the War of 1812 and the later Napoleonic campaigns. The Library was particularly fortunate in effecting the purchase for Mr. Todd through one of its London agents, as the opportunity for obtaining so large a file lessens each year, and rarely occurs except, as in this case, on the breaking up of an old institution.

From Alfred T. Turner, Esq., Treasurer of the City of Boston, a valuable collection of between 400 and 500 volumes of Boston City documents including thirty-two volumes of the "Municipal register" between the years 1851 and 1894.

The initial purchases of books for the 20th Regiment Alcove have been made this year by the Library under the direction of the Committee of the 20th Regiment Association. The 205 volumes bought at an outlay of \$407.03 are chiefly regimental histories of troops serving in the civil war.

From Robert Walcott, Esq., Cambridge, Mass., seventy volumes of rare classical works, including Fabricius, "Bibliotheca Graeca 1721-28," in fourteen volumes, and the following old folios: Estienne (Stephanus) "Thesaurus Graecae linguae ab Henrico Stephano constructus. (Geneva) 1572," five vols.; Hornanus's "Dictionarium Graeco-Latinum. Basileae, 1557," and Scapula, "Lexicon-Graeco-Latinum, 1652."

From William B. Ware, Esq., thirty-four volumes of church music, mainly collections made by Lowell Mason, George F. Root, and Loring B. Barnes, and published in Boston.

From Mrs. A. C. Wheelwright, fifty-five volumes of general English literature, including a few old Boston and Cambridge imprints.

From Messrs. James D. Law, Laurens Maynard, David McKay, Harrison S. Morris, Herbert Small, Horace L. Traubel and Francis H. Williams, a second instalment of books and pamphlets for the Whitman collection. (The first instalment was made last year.) Also a large number of newspaper clippings, magazine articles and broadsides relating to Whitman from Dr. R. M. Bucke.

From the Most Reverend John Joseph Williams, Archbishop of Boston, a set of the "Acta Sanctae Sedis," or Acts

of the Holy See, in twenty-eight volumes, published in Rome by the Society for Propagating the Faith. This is the official publication, issued periodically, containing the decisions, etc., of the Congregations and Commissions of the Roman College of Cardinals, advising or reporting to the Pope on various matters relating to the doctrine and practice of the Roman Catholic Church.

The set is indispensable to the student of Roman Catholic doctrine and practice, and the acquisition of it has been urgently desired by the Library. This fact having come to the attention of the Archbishop he generously ordered this set to be purchased, to be specially bound, and to be delivered to the Library as a gift from him.

From Robert C. Winthrop, Jr., Esq., a volume comprising the first four parts of the "Suffolk Manorial Families," relating exclusively to the Wintrops of Groton and families allied to them, a publication largely composed of matter nowhere else to be found in print.

BINDING.

The work done by the Library bindery during the past year is indicated by the following schedule:

	Vols.
Books bound in B. H. binding	8,511
Large daily newspapers	48
Branch newspapers	37
Pamphlets	2565
Total	11,161
Books repaired	4,885
Catalogues and novels stitched in covers	2,270
Cards mounted	1,497
Maps mounted on cloth	886
Volumes guarded	1,541
Volumes interleaved	2
Portfolios made	120
Boxes "	115
Blocks "	620
Pads "	11
Pouches "	57
Temporary covers made	1,145
Library publications folded and stitched	88,521
Library publications folded, sewed and covered	13,921
Photographs and engravings mounted	2,941
Office desks covered	7

Time on miscellaneous work	48½ days.
Time cutting and bundling slips and cards	63½ days.

Books bound for the various branches, received from the branch department (included in the number of books bound in B. H. binding):

	Vols.		Vols.
Charlestown branch	56	Dorchester branch	28
East Boston "	6	Jamaica Plain "	33
Brighton "	115	South Boston "	32
South End "	24	Roxbury "	88
West End "	53	West Roxbury "	5
Total			440

It is not apparent that the reduction in the working day in this department (from ten to nine hours) has reduced the output. The present force, sixteen hands, is not sufficient, however, for the work to be done, and two more assistants (one forwarder and one sewer) have been asked for.

The outside contract work (binding in cheaper form of branch books and old Lower Hall books) has comprised the binding of 13,929 volumes, as against 8,931 in 1896, at a total cost of \$3,802.11; 7,862 of the above were branch books.

During the year the contract with the outside binder has been revised. The material now called for (instead of a leather) is Holliston Grade E book cloth; and the authors and brief titles are lettered on the backs. Methods of sewing and other details have at the same time been improved. The result now secured is a binding more comely, cleaner and more durable. The lettering adds a great convenience. The cost is a fraction greater.

CATALOGUES.

As to the work of the Cataloguing Department during the year I quote very nearly verbatim the summary contained in the report of the Chief Cataloguer.

Work Done. —

Number of volumes and parts of volumes catalogued	61,573
Number of titles for the same	36,032

These surprising figures need the explanation that they stand in part for the large purchases of popular books for Stack 4, the branches and deposit stations. As these

are largely duplicates the work of the cataloguer is reduced to the minimum; 17,861 volumes represent the recataloguing of old books rendered necessary by the receipt of new editions, or new copies given particularly for the special collections, — all this work tending to the clearing up of the card catalogue and bringing it up to the present standard. It is cheaper and less laborious to reprint these combined titles than to take out the cards from the catalogues and alter them. This we owe to the reduction of cost brought about by the Linotype. Three thousand two hundred and eighty-one volumes of continuations of serials are included, also work on the Music collection, as hereafter detailed.

The difference between the number of titles and volumes is explained by the duplicates already referred to and by long sets of periodicals recently catalogued. For example, in the case of the London "Times" lately received one title represented 242 volumes.

The cards placed in the various catalogues at the Central Library, as far as it has been found convenient to count them, number 93,783. Beginning early in the year the cards for the branch libraries were counted at each branch, and they are not entered in the above enumeration.

Periodical List. — One of the most interesting publications of this department for many years is the list of periodicals, newspapers, transactions and other serial publications currently received in the principal libraries of Boston and vicinity, which was published in May. The material furnished by the thirty-six libraries interested was arranged, edited and printed, at this library, in a volume of 152 pages, (comprising over 5,600 titles), which has attracted wide attention and given a decided impulse to the movement for co-operation among librarians.

The Higher Education of Women. — Another coöperative undertaking has been edited and printed at this Library, bearing the title Contributions towards a bibliography of the higher education of women. This list was compiled by a committee of the Association of Collegiate Alumnae and edited by Miss Mary H. Rollins of the Cataloguing Department. Two thousand copies were purchased by the Association, the balance remaining for distribution by the Library.

Bibliography of Boston. — Still another coöperative undertaking is the list of the publications of the Town of Boston, which began to appear in the Bulletin of February, 1898. Here is collected a record of documents found in the Boston Public Library, the Massachusetts State Library, the Boston

Athenæum, and the libraries of Harvard University, the American Antiquarian Society and the Massachusetts Historical Society. This list was prepared by the Chief Cataloguer in part from material furnished at the request of the Library by Mr. Edwin M. Bacon. It is intended as the first instalment of a Bibliography of Boston, for which the titles are mostly at hand.

While the special lists of books published from time to time by this Library are valuable as revealing what it has on any given subject, they are still more useful in indicating what is lacking, to be supplied by purchase or by gifts.

The Annual List.—This year marks the beginning of a new and significant enterprise, namely, the Annual List of additions to the Library. This list contains over six thousand titles selected from the monthly bulletins from January, 1896, to October, 1897, inclusive.

In adopting the Linotype for the printing of its catalogues, it has been the purpose of the Library from the beginning to repeat these catalogues in various forms, by using the solid lines of types or “slugs” of this machine, retaining them for this purpose after their first use. The Annual List is attractive and popular, and the experiment has proved a success.

The preparation of this list has been in the hands of the Editor of Library Publications, seconded by the Chief of the Printing Department.

The Bulletin.—Under the charge of these same officers the Monthly Bulletin has appeared regularly. Besides the titles of new books the Bulletin has contained lists of books on the Eastern question since the Turko-Russian war of 1877 and 1878, and on the Yukon gold fields and Alaska. The latter list, which was prepared by Mr. Murdoch, proved timely and popular, and a second edition was called for.

The Chamberlain Autographs.—A description of the Chamberlain collection of autographs, now in this Library, has been edited by Mr. Swift, from material furnished by Mr. Edwin M. Bacon, and was published in April last.

Other Lists.—A Supplement to the English Prose Fiction List of 1893 has been printed; also a new select list of books for younger readers. A card catalogue of books sent out on deposit has been prepared.

Science.—Mr. Murdoch's work for the year on catalogues of works of science is summed up as follows:

1. Scientific periodicals	1,952 titles
2. Non-periodical scientific works	1,672 “

- | | |
|---|------------|
| 3. Scientific works in Harvard College Library ¹ | 244 titles |
| 4. Scientific works in the Boston Society of Natural History ¹ | 13,007 " |

Lists Nos. 1 and 4 are completed. Any additions to these lists in future will represent actual new accessions.

One thousand seven hundred and forty-six titles of List 4 have been compared with the catalogues of this Library. Of these, 443 were found to be in both libraries, 1,303 in the library of the Society only. When the work of examination is extended to the other libraries in this vicinity there will be at hand the basis of a co-operative movement of great importance.

The Galatea Collection.—A List of the Galatea collection of books relating to the history of women, given to this Library by Col. Thomas Wentworth Higginson, will be published in the Bulletin for March, 1898. The titles of these books have been added to the card catalogues. They number 1,066 volumes, counting composite volumes as one.

The Codman Collection.—The collection of books on landscape gardening, given to this Library by Mr. and Mrs. James M. Codman, has been catalogued, and the cards are in the hands of the printer. This collection numbers 691 volumes.

Historical Fiction.—During the year the Historical Fiction list has been continued by Mrs. Seaver, from material collected by her and by the chief of the department. The cards for Italy, Greece, ancient and modern, Persia and Assyria are ready for revision.

Newspapers.—A temporary card catalogue of the bound volumes of newspapers has been prepared under the supervision of Mr. Blaisdell.

Military Library.—The books on the Civil war given to this Library by the Twentieth Regiment of Massachusetts Infantry, through its committee, have been catalogued by Miss Barlow, and considerable work has been done on the revision of our own collection of like material.

Miscellaneous Work.—The transfer of many thousand volumes to different shelves in the new Library building has thrown much labor on the Catalogue and Shelf Departments.

The work of clearing the catalogues of the cards for books lost or worn out has been continued. Two thousand two hundred and sixty-five cards were taken from the Stack 4

¹ Mr. Murdoch has devoted a portion of his time to the systematic examination of the resources of the neighboring collections of scientific literature, and the actual transcription of titles from their catalogues, in order to avoid unnecessary duplication of material in purchases for the Public Library.

catalogue in the months of February, March and April alone. In this task aid has been given by the Issue Department.

Special Libraries.— Duplicate sets of cards are furnished for the collections of books in the Special Libraries' Department. Mr. Fleischner is having the titles in the Thayer collection cut from the printed catalogues and mounted on cards. He has also prepared a selected list of books in the Boston Public Library recommended for reading in connection with the illustrated lectures on historic art given by James Frederick Hopkins, Director of Drawing in the Boston Public Schools. This list was printed in the syllabus of this course of lectures.

Work Begun — Music.— During the year Mr. Hunt has catalogued of the Allen A. Brown collection 4,658 volumes and 2,157 parts, with a total of 6,333 titles, and has also recatalogued 76 volumes with 67 titles. The number of volumes catalogued since the beginning is 12,967, with 12,000 titles; also 13,645 parts. Since Mr. Brown is constantly adding to his collection the end recedes as Mr. Hunt advances; but he confidently hopes to finish the cataloguing of the collection and to have most, if not all, of the titles in the general catalogue, and practically ready to print in book form during the present year.

Coöperative Indexing of Scientific Periodicals.— Arrangements have been made for the coöperative indexing of certain scientific serials by the following libraries: The Boston Public Library, the Columbia University, the Harvard University Library, the John Crerar Library of Chicago, and the New York Public Library. The list at the outset comprises some 184 serials not elsewhere indexed. They may be classified as follows:

General (the more important learned societies), 74; Sociology and Political science, 21; Anthropology and Ethnology, 10; Archæology, 12; Philology, 15; Oriental studies, 7; Geography, 10; History, 12; Philosophy, 8; and the balance scattering. Publications devoted exclusively to the natural and mathematical sciences have not been included, as they will come within the scope of the Royal Society Index, which is to begin in 1900. The editing and printing of this Index will be under the direction of the Publishing Section of the American Library Association. The index entries begin with the volume current on January 1, 1898. The results come to each of the five coöperating libraries in card form (two copies of each card), and are available to other institutions on payment of a moderate subscription. The first instalments of copy have been sent to Mr. William C. Lane, the

editor. Mr. Murdoch is in charge of the indexing to be done by this Library.

Social Reform. — A list of works on certain questions of the day, economic and social, compiled by Miss Rollins, is partly in type.

Anthropology and Ethnology. — Professor W. Z. Ripley, of the Massachusetts Institute of Technology, has compiled a list of works on the Geographical anthropology of Europe, which will be submitted to other scholars for suggestions, and, on its final revision by the Library editor, will be published by this Library.

Library Buildings. — Ten years ago this Library issued a list of the pictures and plans of library buildings in this and other countries. This was a record of the material collected by this Library, and also an index to what had been published in architectural periodicals. This list having proved of service to those planning libraries, a new and much enlarged edition has been prepared by the chief of the department.

Biography. — A list of collected biographies in this Library has been undertaken.

Historical Documents. — The pamphlet to contain the text of the four great historical documents, forming the four large tablets in the Chamberlain series, is in the press.

The Branch Libraries. — Finding lists for all the branches were printed during the year, bringing their record of new books up to the time when a common shelf-number was given to the same books in these different libraries, thus enabling all to use the same catalogue. Early in the coming year a new joint Finding List of new books can be printed. By a new arrangement the past year the cataloguing of books for the branches is now done at the Central Library, and not at the branches. An author-card is kept by the Catalogue Department at the Central Library, to which department an acknowledgment is returned for books and cards received by the branches. The experiment of printing titles instead of writing them has proved a success.

PUBLICATIONS.

There were issued 1,038 pages of printed matter during the past year as against 360 during the preceding. The publications issued, as tabulated by the editor, Mr. Swift, are as follows :

	Date of Publication.	Pages.	Edition.	Price.
Annual List . . .	January, 1898,	192	3,985	.05
Chamberlain Pamphlet .	April, 1897,	71	2,133	Free.

	Date of Publication.	Pages.	Edition.	Price.
English Fiction Supplement	October, 1897,	48	2,576	.05
Higher Education of Women	May, 1897,	49	4,000	.15
		(2,000 to committee.)		
Periodical List	May, 1897,	152	2,443	.25
Rules and Regulations, and Jan., 1898,	December, 1897,	16	10,596	Free.
Rules for Employees	February, 1897,	16	200	"
Y List (books for younger readers)	February, 1897,	32	4,950	.01
Yukon Gold Fields	September, 1897,	8	1,065	Free.
Branch Finding List:				
Charlestown	June, 1897,	20	1,050	"
Dorchester	June, 1897,	32	1,031	"
Jamaica Plain	June, 1897,	24	1,000	"
Brighton	June, 1897,	32	1,041	"
East Boston	August, 1897,	24	1,032	"
Roxbury	August, 1897,	16	1,000	"
South Boston	August, 1897,	24	1,033	"
South End	August, 1897,	24	1,050	"
West End	August, 1897,	8	1,137	"
Monthly Bulletins:				
March, 1897		16	5,002	"
April, 1897		16	4,930	"
May, 1897		24	5,053	"
June, 1897		20	5,010	"
July, 1897		16	4,971	"
August, 1897		16	4,944	"
September, 1897		16	5,028	"
October, 1897		20	4,960	"
November, 1897		24	5,087	"
December, 1897		24	5,003	"
January, 1898		24	7,518	"
February, 1898		24	7,500	"

The fortune of these publications in use, distribution and sale has varied greatly. The Annual List, the Periodical List and the Monthly Bulletins have been distributed free to nearly one thousand persons and institutions on our Exchange List. Of the Chamberlain Pamphlet 577 copies were so distributed, and of the Bibliography of the Higher Education of Women, 408 copies; of the English Fiction Supplement, 309. The Monthly Bulletins (distributed free to all applicants) meet with ready interest; and beginning with the January (1898) issue the monthly edition was enlarged from 5,000 to 7,500 copies. Of the publications for which a charge is made only the Annual List and the Y List have found ready sale.

The end of the year finds the edition of the latter, issued at the beginning, very nearly exhausted. The Annual List is at the "reserve" point within three months of its date of issue. But the sale of this has been effected through unusual efforts to interest the individual reader.

The English Fiction supplement, however, the Higher Education List and the Periodical List, have sold almost not at all. The two former were let take the usual course. But in the case of the Periodical List a special effort was made. A circular, descriptive of the scope of the list and suggestive of its value, was sent to every member of the faculties of Harvard University, Boston University, Tufts College, the Massachusetts Institute of Technology and Boston College; and copies for distribution to the librarians of seven other of the higher institutions of learning throughout New England. This circular contained also a description of other Library publications, and a reference to the system of inter-library loans. Copies of the Serial List were, by permission, placed for sale at Harvard, the Institute, Boston University and Tufts College.

The additional suggestion was made (in the circulars) that this list represented an undertaking at great labor and considerable expense, in the interest of the higher learning, and that its failure to interest the scholars associated with the higher institutions of learning would tend to discourage such undertakings hereafter.

The total sale of the Periodical List has reached to date but 146 copies. Of the Higher Education List, but thirty-four copies have been sold. Two thousand copies of this were, however, subscribed for by the Association of Intercollegiate Alumnae.

And yet the cheapness of paper to-day is such that the bare possibility of sale advises the printing of a large first edition of such untried publications rather than to risk the expense of resetting the forms for a later second run, when the presses can ill be spared from other work.

But it will be noticed that only a portion of the cataloguing enterprises of the Library involve publication, with its uncertainties. The great bulk of the work of the department goes to strengthen the card catalogue. This work is less ostentatious. It advertises less the Library abroad. But it is certain, it involves no waste, and it is durable.

The number of publications distributed free of charge by this Library during the year has reached 83,282 copies. This includes 5,305 copies of Annual Reports and 11,242 of the Rules and Regulations. The total amount realized from sales during the year was but \$441.30.

PRINTING DEPARTMENT.

As last year the work of the Printing Department has included a mass of work not implied in the list of ordinary library publications. As stated by the Chief of the Printing Office:

"The output of the department continues to include practically all of the printed work of the Library (except that from intaglio, lithographic and heliotypic plates, the printing of which constitutes special trades), amongst which may be mentioned:

"Cards for the Card Catalogue: 3,000 forms, equalling 15,000 titles as counted by this department, *i.e.*, 'main cards,' whether with one title more or less to the card. Reference cards (and other mere duplicates so far as the work of this department is concerned, numbering from eight to ten for each 'main card'), are not included. It is expected that the printing of the cards representing the Allen A. Brown Collection of Music will considerably increase this amount during the coming year.

"Cards for the Card Catalogues at the branches: Sixty-three forms, equalling 544 titles (with reference cards and other duplicates amounting to from fifty to sixty to each 'main card').

"Call slips (of eight kinds), 2,290,475.

"Stationery: Currently consumed stocks of all kinds, 363,507.

"Blank books, 117.

"Circulars, etc., 9,354.

"Signs, etc., 1,394."

The equipment of the department has been improved by the addition of a one-half-medium Colt's Armory Press.

The second linotype, taken originally on lease, was last May purchased outright.

The use of the linotype for such work as ours is matter of general concern to the library profession. At the International Conference of librarians held at London last summer there were accordingly exhibited by us examples of the work of the machine, with a pamphlet compiled by the chief of our office, descriptive of our experience with it to that date. Both exhibit and description awakened decided interest.

REGISTRATON.

Appendix VI., as last year, relates to the card-holders in the library. The tables classifying the persons holding cards, by sex, by age, by occupation and by residence (as between

the several districts of the city) will be found both interesting and significant. The statistics as to the distribution of card-holders throughout the city are more graphically indicated in the map to which I have previously referred, which has been prepared to show (1) the library system as it stands to-day, representing facilities; and (2) the percentage of card-holders to the entire population in each ward, indicating the relative amount to which the facilities have been taken advantage of. The report of the Supervisor of Branches contains some comment upon these figures, which is worthy of consideration.

The total number of active ("live") cards outstanding January 31, 1898, was 64,973, as against 45,606 outstanding February 1, 1897, showing a gain of 19,367 card-holders during the year. This means that on January 31, 1898, 42½ per cent. more persons stood qualified to draw books for home use than stood qualified on February 1, 1897.

The gross number of present active card-holders exceeds, I believe, the number reported by any public library, except the system known as the New York Free Circulating Libraries.

During the past year pupils' cards have for the first time been issued under Article I., section 2, clause 4, of the Rules and Regulations. The provision does not specify a lower age limit; but the issue will be confined for the present to the ages between ten and twelve (twelve years being the minimum for the ordinary card).

Six additional educational institutions have entered into agreements with the Trustees to be responsible for books taken for home use by their non-resident students, thus making thirty-seven such institutions now on the list.

USE OF THE LIBRARY.

I. — Reference Use.

As stated in my last annual report (pp. 39-40), full statistics of reference use are no longer possible nor attempted. The general testimony of the custodians of the various reference departments is that the volume of use has perceptibly increased. This is true in the Bates Hall Reading-room, in the Periodical and Newspaper-rooms, and in general throughout the central building. It is also true at the branch libraries, where the introduction of "open shelves" and the display of the periodicals upon the tables have added attractiveness to reference as against home use.

On twelve Sundays of the year an account was taken of the persons entering the Central Library building between 2 o'clock and 6 o'clock, P.M. The smallest number on any one day was 1,541 (July 18th); the largest was 5,309 (February 27th, 1898; the count began with March 7, 1897, and over-ran the fiscal year). The average per Sunday was 3,560; and the total for the twelve Sundays was 42,731. Of these 33,543 were adults and 9,188 children.

A count for a single week has been taken for the week ending March 5, 1898. It resulted as follows:

	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Total.
Adults,	5,626	3,985	4,145	3,880	3,624	3,559	4,788	29,607
Children,	1,544	402	358	387	334	333	1,099	4,457
								34,064

Deductions must be made for mere "visitors;" but the proportion of such on week days is not in fact very great. The week selected was in a season of heavy use. But an inference that, on the average the year round, 30,000 persons a week enter the Central Library building, and that of these the large majority come to use in some way, the collections in the Library would not be unjust.

Special Libraries.—The activities of the Special Libraries' Department have advanced in scope and volume since last year. The visits of classes and clubs for the study of material in the Fine Art collections (chiefly photographs) so far as recorded have included the

	Times.	Aggregate of persons.	Average.
Boston Art Students' Ass'n,	18	360	20
Pallas Club,	22	352	16
Other clubs and classes,	64	640	10

But the informal use by teachers and pupils (*e.g.*, of the public schools), especially on Saturday, is not recorded.

The Allen A. Brown Collection of Music was made generally accessible, with an attendant in charge, beginning in October last. To it were removed the current numbers of important musical periodicals. Since the room has been open the display on the tables from week to week of scores represented in the Symphony and other important concerts has added a special interest to students.

Exhibits have been continued on appropriate occasions; sometimes of material owned by the Library, at other times of material specially loaned for the purpose. Among these exhibits have been the following as reported by the Custodian of the department. These are in addition to periodical

exhibits of photographs and plates selected out of the Library collection and displayed for a week or a fortnight at a time.

Special exhibitions have been given in the Barton room; *i.e.*, others than the regular exhibitions of photographs, which are changed every week, as follows:

February 14. Kelmscott Press publications. Complete set of sixty-five volumes from the Library collection, and loans by Messrs. F. W. French, F. H. Day, F. W. Lee, etc.; also photographs of Kelmscott Manor.

February 22. Loan collection of Washington portraits, loaned by Mr. George R. Barrett.

March 13. Photographs of buildings on Copley square, and plans in connection with the movement for the improvement of the square.

April 3-19. Industrial arts in connection with Arts and Crafts Exhibition.

Book-plates by Boston artists. Loans by Messrs. H. S. Rowe, F. J. Libbie, R. Liechtenstein, and direct contributions by living artists.

Book-bindings. Examples loaned by Mrs. John L. Gardner, and by Messrs. F. W. French, A. L. Hollingsworth, C. H. Taylor, Jr., F. H. Day, etc.

April 22. Loan exhibition by Houghton, Mifflin & Co., the Youth's Companion and Prang & Co. Lithographs, prints and drawings showing modern methods of illustrating books, in connection with the Massachusetts Library Club meeting and lectures by Mr. W. S. Scudder and Mr. Louis Prang; and a lecture by Mrs. H. J. Carter on travelling exhibitions of pictures.

June 10. Autographs, views and books in connection with the transfer of the Bradford manuscript.

July 10. Maps and books, views, etc., for Cabot celebration.

October 4. Portraits, drawings, etc., in celebration of the 400th anniversary of the birth of Hans Holbein.

October 15. Original drawings and paintings for book illustration by Howard Pyle, E. H. Garrett, Eric Pape, Van Muyden, Myrbach, etc. Loaned by Little, Brown & Co., Roberts Bros., and by the artists themselves.

November 12. Hollyer photographs of the English Pre-Raphaelite school.

December 6. Complete set of photographs of the Parthenon frieze and other views of the Acropolis of Athens.

December 20. Photographs of Nativities.

January 1. American mural decorations.

But the above list represents but a portion of the service to which the collections of the Fine Art Department are put. During the past year portfolios of photographs and

process reproductions (mounted plates of the *Klassischer Bilderschatz* and *Klassischer Sculpturenschatz* and other cheap series, dissected for the purpose) have been made up and sent out to the branches and to certain of the public schools, where they are either displayed for a time on the walls, or used to illustrate some subject in art or history, or geography under study at the time. One such portfolio may illustrate Venice, another the art of Ancient Greece, etc. The cost of this material is slight in proportion to the service it renders and the enthusiastic interest it awakens; and the field offers tempting opportunities for extension.

At the Central Library it is increasingly difficult to contrive suitable space for persons coming in groups to consult this material. The ordinary use of the several collections on the Special Libraries' floor is encroaching on the rear wing; and unless by a folding partition or similar device a space be set off for the use of clubs and classes, they can hardly be accommodated without inconvenience to ordinary readers. To the need of class-rooms there should be added the need of a lecture hall—a room capable of seating an audience of from 400 to 600 persons. Already the Library has had the tender of competent lecturers who would interest the public in much material that could not otherwise or so effectively be brought to notice. Since the nominal date of this report, one such lecture (under the auspices of the Unity Art Club) has been given, on the Art of Ancient Greece. The audience so outnumbered the capacity of the only room available (the Barton-Ticknor) that the lecture had to be repeated. An audience of 500 persons can readily be secured for any such occasion.

It is exceedingly to be hoped, therefore, that in course of time a provision may be made for class and special study-rooms and for a lecture-hall of reasonable proportions.

Newspaper-room.—The use of the Newspaper-room is as large and as nearly continuous as that of almost any other single reference department. The number of readers at one time now exceeds 200 (on March 28, 1897, *e.g.*, at 6 P.M., it was 225 persons, of whom 189 were reading the American papers and 36 the foreign, while in Bates Hall the maximum at one time, January 22, 4 P.M., was 256); and the attendance is surprisingly large during hours when the other departments are comparatively deserted. At the beginning of the winter, placards, calling attention to the existence of this Reading-room and its resources, were printed and distributed to the leading Boston hotels. These notices state that the room is free, that there are over 300 newspapers on

file, and append a list of the places represented. These placards were generally accepted, and now hang in the lobbies of fifteen hotels. They have doubtless attracted to the room many strangers who would otherwise have remained ignorant of its existence.

The number of papers now currently taken is 319. Of these 181 are published in America in English; 20 published here in foreign languages. Thirty-nine are English papers, published in England; twelve published in English, outside of England and the United States. The remainder, sixty-seven, are foreign papers, in foreign languages.

Children's room. — The service rendered by the Children's department at the Central Library is something more than the merely kindly and stimulating service of suggesting and supplying wholesome general reading. A very considerable amount of reference work is carried on in this room and in the Patent-room and Bates Hall under the guidance of the Custodian of the Children's room. School children having topics requiring special research commonly apply to this department for aid; and the aid given is the more effective from the cordial relation already established in the use of the miscellaneous collection. The influence of this department is not to be reckoned in figures; but it is apparent to even the most casual observer. And in sustaining and extending it, the bequest of Mr. John C. Paige, when it comes to be available, may achieve a service that falls to few gifts for public uses.

The department needs more space and greater seclusion. The present room, besides being a passageway, is thrust too much upon the attention of the mere sight-seers. The removal of the Patent Collection, as is proposed, to a gallery in the Newspaper-room, would at least add to the space for children's use and secure a partial seclusion.

Loss of Books. — The loss of books in the reference departments continues slight in volume, although in instances aggravating in character. The total number of books "missing" from the Bates Hall reference shelves (some 8,000 volumes) on January 31, 1898, is forty-six. The most of these are small text-books and hand-manuals. A few are volumes from sets. None are costly to replace. Mutilation is occasionally discovered in more costly works, and is more difficult to forgive. A volume is often taken away with intent to return it after use; but mutilation indicates a deliberate intent at final expropriation, and thus more conclusively a moral turpitude. It indicates, moreover, a defiance of that ordinary regard for the integrity of a book as a book, a remnant of which is apt to reside in the ordinary book-thief.

The loss of books from the "open shelves" in the Circulating departments (the Children's room at the Central Library, and the main rooms at the branches) has, however, reached several hundred volumes. Many of these books are (as we have proved) taken by small children in ignorance of the rules, and then withheld in terror of the penalty. But the number has come to be so large that measures have been adopted at the branches to control more effectively the exits from the Delivery room.

Bates Hall. — There is little special to the year which can be reported as to the operation of this department. The use grows in volume and in seriousness; but it cannot be tabulated. As an indication of the range of inquiry made of the officials at this point, the Custodian of the hall and the officer at the centre desk have kept a memorandum of the subjects as to which information was asked during the past few weeks. Although routine and oft-repeated subjects have been omitted, the list numbers several hundred topics. From it I have selected at random some two score, which I append below. The mental agility requisite to cope with such a diversity of inquiry in quick succession is indicated by even so brief a list.

Some of the subjects on which information has recently been asked at the Boston Public Library:

A Lantern of the 14th century; Statistics of gas and water in large cities; Statistics of females employed in factories; Coat of arms of Florence; Motor engines; Libby prison; Date of eruption of Krakatoa; Method for the cornet; Toasts; Egyptian customs; What Irishmen have done for the country; Feldspar; Date of the building of the Tower of London; Inventions; The Stock Exchange; A poem for April and June; Warships; Is a territory represented in Congress? Ornamental alphabets; Number of deserters during Civil war; Art of the 15th century; Japanese mythology; Picture of Traddles; Origin of numbers; House furnishing; Agricultural statistics of Georgia; Plumbing in the Roman towns; Price of a 100-trip ticket to Wellesley; Cultivation of coffee; Glue and mucilage making; The first Thanksgiving; Toleration act of Maryland; Sleep; Government of Ireland; A Turkish Bible in German; Fluctuations of cotton in 1895; Account of the "Blessing of the Bay"; Defence of mathematics; Manufacture of fibre goods; Dutch painters of 19th century; Chateaux in France; The Tersanctus; Emancipation in the West Indies; Pierre de Provence; Popular election of United States senators; Maya language; Vestal virgins;

Training of wild animals; By-laws for a manufacturing corporation; Physical culture; Springs; Religious orders; The alpaca.

Delays. — The delivery of books to readers in Bates Hall is not yet as rapid nor as effective as it should be. It is true that the readers themselves are guilty of frequent inaccuracies which render precision in delivery very difficult. Of the mishaps recorded during the past year 747 were accounted for by the omission of the reader's name on the call-slips; and 1,973 more by the omission of the table numbers; 405 cases were traced to errors in the Library records, imperfection in the mechanism of transmission or carelessness on the part of the library attendants. The fact that in 9,929 cases the applicants were not to be found at the tables when the books were brought may indicate further negligence on the part of readers; but it may also suggest that the delivery had been delayed beyond the patience of the applicants.

That delays do occur beyond those recorded is well known to the administration. They cannot be obviated fully until increased facilities for issue be provided by the improvements on the Blagden street wing, for which plans have been drawn and funds requested. These improvements involve among other changes the widening of the "tube-room," through the present Librarian's office, a system of intercommunication between the stacks; and a service elevator. Perfection in service cannot perhaps be hoped for under a system of arrangement which attempts to consolidate the two species of demand represented by Home Use and Reference Use. But the changes proposed would certainly better present conditions to the great advantage of each class of readers.

II. — *Home Use.*

Appendix VII. gives the number of books circulated for home use during the past year from each department of the Library, and compares this with such circulation for the year 1896.

From this table it appears that the circulation for home use in 1897 compared with that for 1896, is as follows:

	1896.	1897.	Gain, 1897.
Central Library (including Central Library books issued through branches and stations) . . .	326,254	388,497	62,243
Branches and stations (di- rect issue) . . .	678,765	811,169	132,404
	1,005,019	1,199,666	194,647

showing a gain of nineteen and a half per cent. in this class of use.

In certain departments, however, the gain has been disproportionate; in the Children's department at the Central Library it has been nearly 30 per cent.; 78,005 volumes have been issued from this room for home use during the past year. The circulation of the West End Branch has increased in a like ratio, and now exceeds by 30 per cent. the circulation of any other branch library.

Charging System.—By charging systems of the older type the borrower was required to write his name and address upon every slip presented by him in application for a book. The more modern systems accept his signature in the original registration as sufficient to cover his use of the library during the life of his card; and permit him to identify himself upon his applications for books by his card number in lieu of his name and address. The older system had been continuously in use in this Library until last year. Beginning with last June, however, it was discarded for the new. A further change was the return to the readers of the application slips, which formerly had constituted the record of issue. This record is now made by the Issue Desk attendants upon an independent slip. The slips returned to the applicant form a convenient memorandum of the call-numbers of the books required and may be used over again.

Unsatisfied Applications for Books.—I quote from the report of the Chief of the Issue Department:

“To workers in a large library it is evident that there must always be a large shifting mass of books, volumes on their way from or to the shelves. To readers it is not always clear why books are not available for issue when it cannot be said that they are charged out. In the January (1898) report for the Issue Department, a full statement was given of the results of an investigation of such unsatisfied applications made during one month, December 11, 1897, to January 11, 1898. Reference is made to the statistics in that report.

“*Complaint Slips.*—In February, 1897, a form of slip was adopted, of which the following is a copy:

‘BOSTON PUBLIC LIBRARY.

‘Card holders who, after repeated (say three or more) attempts fail to get the books they call for, will do a service by filling out these slips and handing them to one of the Library attendants. Use a separate slip for each book.

‘I have called without success _____ times for
 book _____ Author _____
 Title _____
 Name of Card-holder _____
 Address _____
 Date _____ 189 _____’

“These slips were placed in the call-slip boxes and have also been handed out to each borrower when definite explanation of the failure of the application could not be given.

“From February, 1897, to September 17, 1897, these slips were destroyed after each complaint had been investigated, and such action taken as seemed feasible.

“Beginning September 17, 1897, through January 31, these slips have been kept and, from time to time, have been submitted to you for inspection. They have then been filed. The following is the record from September 17, 1897 to February 1, 1898:

“Account of failure of the borrower to receive his book:

Charged out on a previous application	402
Charged to the bindery	14
Missing, condemned, transferred to other numbers	121
Wrong information given by Library	1
Mistakes on the part of borrowers	54
Unaccountable failures to supply	92
Miscellaneous	2
Total	686

“Of these—

Applications for fiction 338

“Of these—

For fiction published within the year 76”

The work of the Issue Department involved in the recovery of books over-detained and in the collection of penalties is by no means small in proportions nor slight in difficulty. The number of “mail notices” sent out from the Central Library in 1897 was 8,023; the number of messenger notices, 737; the net amount collected (including payments for eighty-

two volumes lost by the borrowers) was \$3,001. Only sixty-nine volumes were unrecovered of 388,489 circulated from this department for home use. This statistic, it is to be remembered, is under a system which requires no guarantor, but in effect limits its recourse to the card-holder himself.

The above work, and other work, incidental to issue, raising questions as to the standing of card-holders, requires constant reference from the Issue to the Registration Departments. The departments are at present too remote; and should the funds be available for the improvements planned on the Blagden-street wing, a space must, if possible, be contrived for the Registration-desk in a corner of the Delivery room.

Branches and Stations. — As to the work of the branches and stations I again refer to the report of the Supervisor, appended.

SERVICE.

The Library has sustained a loss during the past year of one of its most faithful associates, — José Francisco Carret, who died on December 8, 1897. A record of Mr. Carret's twenty-two years of service in the Library would be extended here had not such a record been published in full and widely distributed in the January (1898) Bulletin.

Resignations have occurred in several of the departments. The most important position left vacant in this way is that of Supervisor of Branches, Mr. Wellman having accepted the position of librarian over the Public Library of Brookline. His work as supervisor has been in a high degree competent, energetic and tactful; and his year and a half of effort has resulted in a marked progress towards the organization of our outlying system upon an efficient basis.

His resignation will take effect from May 30.

Appointments. — The most important appointments have been to the custodianships of the Brighton and the East Boston Branches. To the former (after a temporary provision) Miss Martha N. Hobart (formerly of the Branch Division at the Central Library) has definitely been transferred; and to the latter Miss Ellen O. Walkley was appointed on July 1, 1897, after an open examination for the position held on May 4.

Examinations. — Six general and eleven special examinations were held during the year. One hundred and fifty-six papers were received, sixty-one from male applicants, ninety-five from female.

The total number of appointees to the force have been thirty-three, of which fifteen were male, eighteen female, classified as follows:

	Central Library.	Branches.
Grade B Special,	1	—
“ B	4	—
“ C Special,	—	1
“ C	2	2
“ D Special,	—	1
“ D	—	1
“ E (runners),	15	—
Ungraded,	4	2
	—	—
	26	7

On April 30, Grade A was, by your vote, divided as follows:

	1st year.	2d year.
Grade A Div. I.,	\$18 50	\$19 50
Grade A Div. II.,	21 50	22 50

On April 16 you voted it the opinion of the Board that when funds shall permit the position of Custodian in the Branch libraries should be regraded in Grade A.

International Conference of Librarians. — For the purpose of attending the International Conference of Librarians at London, for certain purchases (including the purchase of photographs above described), and for other library business I was absent from Boston from May 6 until July 24 last. During this absence the conduct of executive work, except as the responsibility was taken directly by the Trustees, fell chiefly upon Mr. Whitney and Mr. Savage. After Mr. Whitney's departure in June for the Conference (which he also attended at your request), that work until my return fell almost entirely upon Mr. Savage. The responsibility for the conduct of each department within itself was left however with its chief.

That the administration of the Library as a whole moved so smoothly is evidence of the interest, efficiency and devotion of those thus variously responsible. And in general I have excellent reason to be grateful for associates who are so ready to receive suggestion and so cheerful, so earnest, and so competent to carry it out.

The statistics themselves show that various departments — for instance, the Ordering, the Catalogue and Shelf, and the Special Libraries — have, during the past year, been called

upon for work unusual in volume or in character or in both; and this all has been undertaken with a cordiality of interest that seems only to increase with the new demands. Where every responsible official is so zealous to do what he may to enlarge and better the service, I hesitate to select out any one for special mention. It would be unfair, however, to omit a special reference to the service rendered by Mr. Whitney. In December, 1896, he was Chief of the Catalogue Department. On January 1, 1897, he took upon him the additional care and responsibility of the Shelf Department. And since that time, without increase of salary or of privileges, he has conducted both these departments. His services in recommending books for purchase have taken him outside the routine even of these departments and outside of the Library day. During my absences from Boston, including the major portion of my absence in Europe he has served in addition as Acting Librarian. For twenty-eight years he had not, I believe, taken more than the regular library vacation when in May last you requested him to attend the London Conference and voted him two months' leave of absence for the purpose in addition to the regular library vacation. He attended the Conference, but was back at his desk before the two months with vacation had expired. Since I took office there have been various occasions on which special difficulties of administration have occurred, — incidental, for instance, to a resignation or reorganization. In no instance has Mr. Whitney failed to assume or to offer to assume additional burden for the sake of relieving me or of saving expense to the Library.

And I must not fail to express my most hearty gratitude to the Trustees as a Board for the consideration with which they have treated such recommendations as I have had occasion to lay before them from time to time; and to them individually for the attention which during my somewhat lengthy absence of last summer they gave to details of administration with which in ordinary course they ought not properly to be troubled.

Respectfully submitted,

HERBERT PUTNAM,

Librarian.

April 22, 1898, as of February 1, 1898.



WEST END BRANCH, CAMBRIDGE STREET.

ANNUAL REPORT OF THE SUPERVISOR OF
BRANCHES AND STATIONS.*To the Librarian :*

EXTENT OF THE BRANCH SYSTEM.

[See Librarian's Report.]

I append to this report a map showing the location of the various branches and stations. In each ward are entered figures furnished by the Registration Department showing the proportion of card-holders to the population. In considering the location of the stations in connection with these figures, other factors besides the extent of territory and the number of inhabitants must be borne in mind, — such as the density of the population, its distribution on avenues of communication, its character — whether poor, or foreign or intelligent.

In general the proportion of card-holders to population is smallest in the districts to the north and east of the Central Library, which contain a large mixture of foreigners; it is largest in the immediate vicinity of the Central Library; grows smaller again to the south, where a poor population extends as far as Roxbury; it increases again at Roxbury, and remains large throughout the suburban districts beyond.

The four districts with the smallest proportion of card-holders to population are: The North End (Ward 6), .0392; East Boston (Wards 1, 2), .0654; Charlestown (Wards 3, 4, 5), .0709, and South Boston (Wards 13, 14, 15), .0757. It is naturally smallest in Ward 6, which has probably the largest foreign element. The district is not badly circumstanced as regards library facilities, having access to the West End Branch, having a delivery of books from the Central Library to the Girls' grammar school, and soon to have a similar delivery to the Boys' grammar school.

At East Boston the case is different; its needs are fully borne out by these statistics. With the exception of the small area at the North End mentioned above, East Boston has the smallest percentage of card-holders to population of any similar district in the city. It is noteworthy, also, that the ward in which the branch is situated has a proportion of card-holders but .0509, against .0802 in Ward 1, extending some three miles to the north-east. These facts strengthen

the contention that the branch should be moved northward, and emphasize the desirability, pointed out in my last report, of placing a station in the further end of Ward 1.

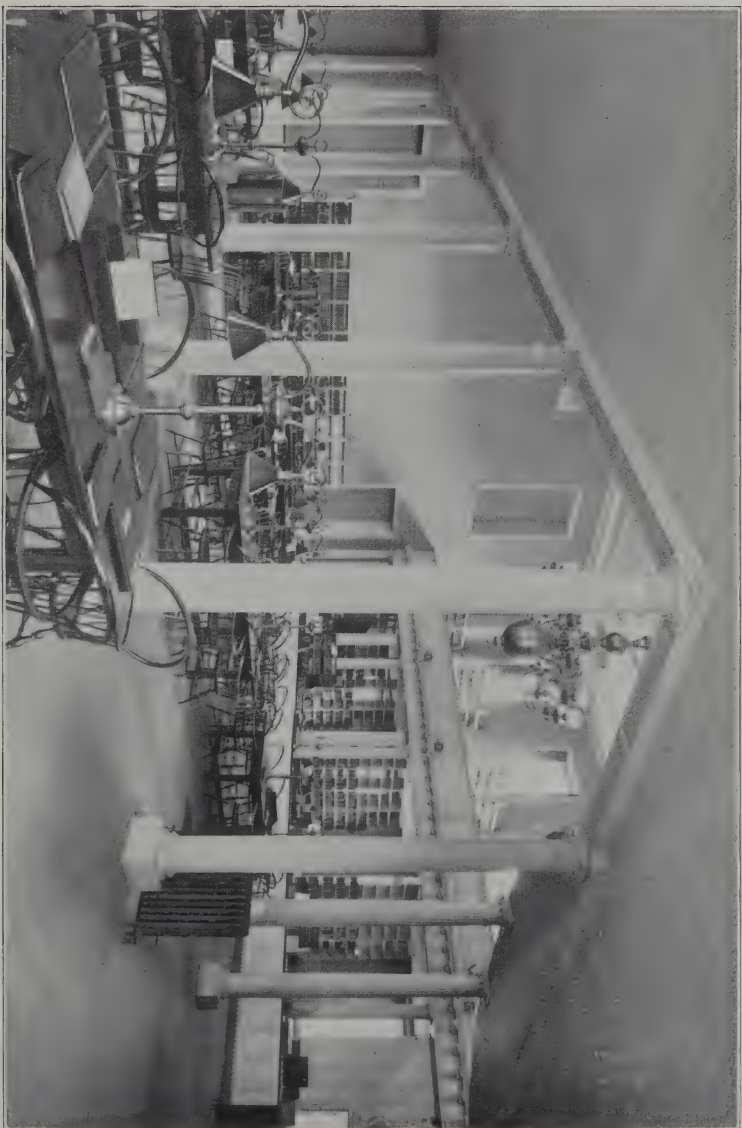
In South Boston, similarly, the reading population lies to the east of the branch, but as lines of travel to the city pass the present location, the situation does not seem especially unfortunate. Ward 17 has no library facilities near at hand, nor does it lie on avenues of communication leading to them. It has a large population, with a proportion of card-holders but .0746. Unless the conditions are alleviated by moving the South End Branch up town (perhaps to a point near the corner of Washington and Northampton streets), in my opinion this region should be entitled to the first new station established.

The district of the city to the south and west is reasonably well provided for since the opening of the Boylston Delivery. There is either a branch or station at every important centre, and no thickly settled district which is not within reach of some agency of the Library. Owing partly to this fact and partly to the intelligence of the population the proportion of card-holders is high almost everywhere south of the Roxbury Branch. In general it grows somewhat smaller as the districts lie farther from the city, where the population, being more scattered, is more difficult to serve. It is low in Ward 22, but, as I mentioned above, the remedy has been instituted by the establishment of the Boylston delivery.

Ward 19 has no station, but the bulk of the population reach the Roxbury Crossing delivery, so that the need is less urgent than elsewhere.

At first sight there seems a superabundance of stations in the small district containing the Warren street, Blue Hill avenue, Bird street and Upham's Corner deliveries. The conditions justifying this number are to be found in a district thickly settled, with a highly intelligent reading population, located on different lines of travel, so that three of these four are among our most used stations. The Bird-street Station, it is true, might be discontinued with little resulting inconvenience, but the compensation being based on circulation it costs very little more to serve the people of the region through this station than it would to serve them through one of the neighboring deliveries.

The stations at Neponset, Lower Mills, Mattapan and North Brighton are among those showing the smallest circulation, and the explanation lies in the fact that they lie in districts having a sparse population and on the outside edges



WEST END BRANCH, INTERIOR.

of these districts. Yet for the population to be served they are conveniently located, and could not well be discontinued.

To sum up, new stations are, in my opinion, desirable, first for Ward 17, then for Ward 1, and in course of time for Ward 19.

BRANCHES AND STATIONS.

In my last report I described in detail defects of form, method and of record in the management of the outlying departments of the library system, particularly of the delivery stations.

The first part of the year was devoted to reorganizing this work. By introducing uniform methods, by defining these methods in written instructions and in a printed pamphlet, and finally by requiring a strict observance of these rules, this part of the work has been brought into smoothly running order, and the result has not only produced far greater economy of administration, but has contributed towards a closer union with the Central Library.

This latter end has been served also by more frequent communication. Besides the weekly meetings of the custodians of the branches at the Central Library, the assistants at the branches and the custodians of the stations have come in from time to time, and, on the other hand, I have visited the stations monthly, the branches at more frequent intervals.

Branches. — The most important features of the year at the branches have been, viewed from within, —

Improvement in the service.

Closer union with the Central Library.

Reorganization and unification of administrative methods.

While viewed from an outsider's standpoint, the noticeable events have been:

Extension of the open-shelf system.

Exhibitions of pictures.

Sunday opening at Charlestown, East Boston and South Boston.

The staff has been strengthened by the addition of Miss Walkley and Miss Hobart as custodians at the East Boston and Brighton Branches respectively.

Besides weekly visits to the Central Library the custodians have attended the meetings of the Massachusetts Library Club, and have from time to time inspected neighboring libraries. Such intercourse has spurred them to greater activity in many directions, especially observable in their efforts to interest and accommodate the public, and

their endeavors to do better work with the schools. I should be glad to dwell on this point at greater length, for it seems to me that there has been in this direction a marked advance which is very creditable to the custodians, and fully as important as any other feature of the year's work.

There is also a desire on the part of the subordinate employees to increase their efficiency. At Brighton, for instance, both assistants have been either studying at home, or attending evening school, while practice in penmanship has yielded good results.

Better use of the Central collection is shown (1) by the increase of 33 per cent. in the number of volumes issued on cards from here through the branches, and especially (2) by deposits on special subjects obtained from the Central Library to supplement material at the branches for the use of schools, classes, literary clubs, etc.

The system of records and of administrative methods has been reorganized and unified. The details have been reported from time to time. A brief summary might include the provision of an "accession book" in which are entered all books added, whether new purchases, replacements or gifts; a "losses book" for all books discarded, transferred, condemned, unrecovered, missing, etc.; a "circulation" record; a new form of shelf-list suitable for a movable system of classification; uniform records of "missing" books; new monthly catalogue reports; forms for reporting and replacing condemned books and for reporting books unrecovered from the borrower; receipts for supplies; receipts for new books sent out; new rules of payment for lost books; new bindery schedules; periodical and frequent reports of the receipt and distribution of Library publications.

The introduction of these and other innovations has involved constant adjustment to new conditions on the part of custodians and staff, and my thanks are due for their ready acquiescence and adaptability.

The most important changes have been those looking towards a union finding list. It was decided to adopt the West End classification because fairly convenient, and already in use. Then the whole West End shelf-list was copied as the basis of a union shelf-list (which in time, with accessions, will serve equally well as a subject-card catalogue for use at the Central Library), and also to prevent conflict with books already classified at the West End Branch. Next printed finding-lists were issued for each branch (except West Roxbury), covering accessions up to June 1. Since that date new books have been classified according to the

West End scheme, and bear the same numbers at all branches. With but few exceptions the same books have been bought for all the branches (except West Roxbury), so that we now have material ready, and are about to print one finding list of accessions since June 1, which shall serve equally well for all of the nine larger branches.

This is the first step towards a union printed catalogue. The next will be to ascertain what books are at the branches, to supply those desirable where lacking, then to re-classify the books on the new scheme. This will furnish material for a select finding-list of the important books at all the branches, but involving, besides the work of compiling the list, great labor in renumbering, cataloguing and listing the books at the branches, it cannot be completed in the near future. The enterprise is, however, under way, and I hope for the appearance of the section containing "history" early in the fall.

This union printed catalogue will need to be supplemented by a complete card catalogue at each branch. Such a catalogue has been perfected this year at Roxbury and at West Roxbury. Work towards such a catalogue has also been carried forward at East Boston and at Brighton. I hope in time to be allowed special assistance to complete the card catalogues at the other branches.

The reference books and books for younger readers were in general the only books at the branches accessible to the public last year. This year the system has been extended, and "open" shelves have been provided for books of interest to adult readers. Besides fiction, works of solid worth—history, biography and travel—have been unearthed from the stacks and placed on these shelves, and because of being thrust upon the attention, have circulated. In addition, all the new books are placed where they may be handled. I estimate that, counting both branches and stations, there are now on shelves open to the public some 35,000 volumes.

The loss of books from these shelves last year was detailed in the annual report. It has averaged this year forty-two volumes for each branch. Most of these volumes are missing from the "open" shelves on which are located the books for children, and we find that the greater part of the loss occurred at the branches in South Boston, Roxbury, and the West End, where these books were particularly exposed. Accordingly arrangements have been made to fence in the space about these shelves, so that by placing the exit where it may be controlled from the Delivery desk, excessive loss may be prevented.

The "open" shelves made it desirable to have author and title stamped on books rebound. In April, therefore, a new contract was made with H. M. Plimpton & Co., for binding octavos and smaller volumes, in full cloth, with lettering in gold.

Since September, portfolios of reproductions of painting, sculpture or architecture, have been sent monthly to the branches for exhibition. These pictures are designed mainly for use by schools. The object in exhibiting them is partly to advertise the pictures, but more to attract people to the branches. They are examined by the general visitor, and, where there are accommodations, by whole classes from the schools. In other cases they are loaned to the schools for short periods. The statistics of the use of these portfolios will, I am informed, be reported at length by the Custodian of the Special Libraries.

The "Boston Evening Transcript" has proved an attraction. It has been received at the branches by gift from the publishers since November 1.

The branches at Charlestown, East Boston, South Boston and Brighton, have been advertised by placards posted in public places, detailing the location, the hours and the privileges offered.

The West End Branch has continued open Sundays, as heretofore, with a good attendance. The plan has been tried of opening also the branches at Charlestown, East Boston and South Boston for reference and reading, from 2 to 10 P.M. on Sundays, from November 1 to April 30. The experiment tried in March and April, 1896, was unsuccessful owing to the season. This year the opening was begun November 7. No provision was made, and there has been no demand, for an issue of books for home use. Consequently only one attendant has been necessary, except part of the time at South Boston. The cost for attendants is \$2.80 per Sunday at Charlestown and East Boston, \$5.08 at South Boston. Two dollars additional is paid in each case to the janitor for heating the rooms. Below are figures showing the average attendance when the branches were opened in 1896, and from last November to January, 1898.

	1896.		1897-98.	
	MARCH AND APRIL.		NOVEMBER TO JANUARY.	
	Readers.	Adults.	Readers.	Adults.
Charlestown	91	21%	213	28%
East Boston			278	8%
South Boston	101	30%	248	36%

The percentage of adults seems very small at East Boston, but there is a large attendance here, and at the other branches



BRIGHTON BRANCH, ROCKLAND STREET.

also, of young men from eighteen to twenty-one years of age who are not classed as adults.

A police officer is present at each branch, and the order is excellent.

In general it may be said that the rooms are comfortably filled, sometimes crowded, with men and children reading quietly for recreation.

The Broadway Extension Station has been open Sundays since October 10, from 2 to 6 and 7 to 9 P.M., both for reading and for the issue of books. During the last three months the circulation has averaged fifty-three volumes per Sunday, while a count shows an average of forty-three readers present at some one time in the afternoon, fifty-four readers in the evening. This means, the seating capacity being about fifty, that the room is practically filled every Sunday.

Stations.—November 1 a delivery and deposit station was opened at Boylston-street Station, making the total number of stations seventeen. The deposit system has been extended to include stations "A," "D," "K" and "T," leaving Neponset the only station without a deposit. The reason for delay there was uncertainty as to the permanent location of the station. The question being settled now, a deposit will be sent as soon as practicable.

The rate of compensation has been reduced, as stations have been transferred to new parties, to twelve dollars for the first 300 volumes or less circulated per month, and two cents for each volume additional so circulated, and on February 1, 1898, this rate went into effect everywhere.

The question of controlling the quality of the issue from deposits by paying a lower rate for fiction circulated has been considered, but the plan is not now practicable. A very simple classification of books added to the deposit collection was adopted in July, which will in time make the plan feasible if necessary. On the whole, I think we can govern this issue by carefully selecting the books sent on deposit. Of the books now at the stations, less than 65 per cent. are fiction, and this includes a large proportion of juvenile books, some of which are not fiction. The fiction is largely either current or standard; and while there is a greater demand for it, examination of the charging slips shows also a very good circulation of books of a more serious character.

In this connection a great deal can be accomplished by suiting the selection of books to the constituency for which they are intended. Thus a volume of literary essays which will circulate well at Lower Mills will remain on the shelves at Roslindale; and Darwin's "Origin of Species," which went

like a novel at Roslindale, would perhaps not be touched at Lower Mills.

These considerations lead to a comparison of the type of station where we pay the proprietor of a store, with that where we have our own attendant.

At these latter stations, children and parents resort to the attendants constantly, not only for advice on what to read, but for information on all sorts of subjects, ranging from the "meaning of the word *opaque*," and the "length of one-sixteenth of an inch," to "how to write a letter of introduction."

The cost of maintenance of a station, with rooms and attendant devoted solely to our use, may be estimated as follows :

Service	\$450 00
Rent	300 00
Transportation	125 00
Miscellaneous	125 00
	\$1,000 00

This does not include an allowance for periodicals, while if no provision be made for a reading room, the item for rent might be cut down.

Our stations at Roslindale, Upham's Corner, and Warren street, which are in charge of storekeepers, cost last year \$774, \$673 and \$667 respectively.

The objections to the type of station devoted to our exclusive use are (1) somewhat greater cost of maintenance; (2) shorter hours. Against these objections may be balanced; (1) more accurate and prompt administration; (2) provision for the use of books on the premises; (3) a decidedly educational influence upon the reading of the public.

Because of this last consideration, and in the light of the very satisfactory work now being done at two of our own stations, I am becoming strongly convinced that after provision for immediate needs by the addition of two new delivery stations, further advance should be in the direction of converting the larger delivery stations into stations devoted to our exclusive use, and administered by our own employees.

Schools.—The Custodians of the branches have made especial efforts to accommodate teachers and pupils. Whenever notice of the topic under study is sent to the branch, the books relating to the subject are set aside for convenient use by the pupils. If necessary, the resources of the branch are supplemented by books from the Central collection. In many cases there is apathy on the part of teachers, so that

the Custodians are obliged to take the initiative. In other instances the teachers are eager, and in response to their requests some 300 volumes have been sent out in small lots relating to special subjects for use at the branches or stations by the school children. The teachers sometimes visit the branches with their classes; but in general prefer to send the pupils.

Twenty-nine volumes have been sent *direct* for use at the Martin grammar school; and fifty-six volumes from the Central Library with sixty-seven from the Brighton Branch have been issued on deposit to the Brighton High School.

So much has been tried in the way of experiment. The results show that the privilege is appreciated. The transportation is provided by the schools. To extend the system would involve some expenditure for service, and a considerable amount for books. Though we have seldom been obliged to refuse sending these deposits for use at the branches and stations, we are frequently unable to supply the particular books desired. For this purpose I should recommend the purchase of a collection of books especially selected in connection with the courses of study.

A delivery twice a week of books, issued on cards, has been maintained during the school year in connection with the Hancock grammar school for girls at the North End.

This school perhaps represented as unpromising a field as could be chosen for the experiment, the children being largely of foreign birth or parentage, and yet the issue during the winter months has ranged from 200 to 275 volumes per week. The distribution of the books at the school, the discharging of the books returned through the school, and the collecting of fines, have been attended to by one of the teachers. The transportation has been done by our own wagons.

In April we are to undertake a similar delivery with the Eliot grammar school for boys at the North End. Any further extension will involve additional assistance in the Branch Division, and can hardly be undertaken without increased accommodations, especially in the way of book elevators.

Engine-houses.—The number of engine-houses receiving deposits of twenty-five volumes per month has been increased from thirteen to twenty-one. I do not see how more can be added without increased resources. An extension of the system to include police stations would doubtless be appreciated.

Other Places of Deposit.—Besides the Cottage Place and North Bennet-street Industrial Schools, the House of

Reformation at Rainsford Island and the Marcella-street Home in Roxbury have deposits of books, 150 volumes, of which twenty-five are changed monthly at the former, fifty volumes exchanged every two months at the latter. Besides these institutions, the Parental School for Boys at West Roxbury receives thirty books each month from the branch there; and the Fleet-street Free Reading-room for Men at the North End has a small deposit from the West End Branch. Other institutions would be glad of similar privileges, and in this direction also our opportunities are bounded only by our resources.

Service, Equipment, etc.—For a full history of each branch, I beg leave to refer to the reports of the Custodians submitted herewith. I note below certain items regarding service, equipment, etc. [The details of this section of the report are here omitted.]

Broadway Extension Station.—On September 1 this station moved to larger rooms at No. 13 Broadway Extension, and was fitted with oak furniture, shelving, tables, desks, chairs, etc., etc., costing \$368.25, and paid for from a special appropriation.

STATISTICS.

It remains briefly to review the statistics of the year compared with those of the previous year.

Books.—Four thousand six hundred and fifty-seven volumes of new books have been purchased for the branches this year against 14,266 volumes the year before. But the bulk of those bought in 1896–97 were either reference books or “Y” books,¹ so that the accessions of the past year represent, I am informed, a larger selection of general current literature than the branches have usually received. A considerable number of books, besides those published currently, has been purchased also, to fill incomplete series, to contribute towards uniformity of the collections, with a view to the union catalogue as well as to present needs.

One hundred and forty-seven volumes have been received as gifts to the branches against ninety-eight gifts the year previous. This figure, 147, does not include a great many books offered for the branches, but either unsuitable, or more suitable, for the Central collection.

One thousand six hundred and seventy-nine volumes have been worn out at the branches against 1,832 volumes the year previous. One thousand and sixty volumes have been bought as replacements against 1,135 the year before.

¹ Books selected for Younger Readers. (Select list of about twelve hundred titles.)



JAMAICA PLAIN BRANCH, CENTRE STREET.

Eighty-six volumes have been destroyed because of being exposed to contagious disease, while only eighteen volumes were so destroyed the year before. This probably does not mean that a greater number of books has been exposed, but that owing to the reports of cases of contagious disease which are now sent daily to every branch and station, a greater number of books so exposed has been detected.

The weeding out of useless books has gone forward, and 4,235 volumes have been transferred to the Central Library against 1,888 volumes in 1896-97.

Of the books missing from "open" shelves, I have spoken above. Forty-five volumes are missing from the closed shelves against twenty-four volumes the year before.

Seven thousand eight hundred and sixty-two volumes have been bound by the contract binder against 6,139 volumes the year before. The increase is due to the fact that the "Y" books purchased new in 1896 and placed on the open shelves subject to constant wear, are now coming to need binding; the case is similar with regard to the books of the West End Branch which were nearly all new in 1896. More than one-fourth of the total, or over 2,000 volumes, have been bound for the Roxbury Branch. This is due to the fact that this branch supplies two stations with books for deposit use, which involves constant handling and wear. Custodians and assistants have been carefully instructed in methods of binding and repairing. I have given personal supervision, and can report that the work has been economically administered.

Circulation.— I submit a table of circulation showing an increase at almost every branch and station. The gain of 8 per cent. in the home use issue at the branches is, in my opinion, due partly to the addition of many attractive books the past two years, partly to greater activity of custodians and assistants. The gain of over 97 per cent. in the number of volumes issued directly from the stations, is probably due largely to the extension of the deposit system. The gain of 38.9 per cent. in the issue from the Central Library through the branches and stations may be accounted for partly by our efforts to supply the books applied for, by the addition of more books, etc., and partly, I think, to closer relations between the Central Library and the outlying system.

The gain in the issue through the entire branch system is 21 per cent.

It should be noted that the increase in the circulation of the branches means more than would appear on the face of it, as by the extension of deposits and the establishment of new stations much of the branch clientage has been diverted.

Though the issue for the year at East Boston shows a slight loss, the issue since July 1, when Miss Walkley took charge, shows a decided gain over the corresponding period last year. The only branch which is running behind is the South End, and there, it is fair to assume, the loss, which is small, may be due to a larger use of the Central Library by persons formerly using the South End Branch.

Expenditures. — In connection with statistics of circulation is submitted a table showing an itemized account of the expenditures for each branch and station.

The total amount spent on the branches has been, roughly, \$6,000 less than the previous year, the decrease being mainly in the expenditure for books.

While the circulation at the stations has nearly doubled, the total cost has remained about the same.

To show the comparative efficiency, I have calculated the cost per volume of circulation of each branch and station, excluding the item of rent for branches which occurs in only two cases, but including the rent of stations and reading-rooms.

It may seem that the high cost per volume of certain of the reading-rooms makes against my recommendation to convert the larger deliveries into similar stations. It is, however, due to the small population served, and consequent small circulation at these reading-rooms. At Broadway Extension and at Mt. Bowdoin the cost per volume is low, and a high rate need not follow a change in the type of the most used deliveries.

For comparison of branches with stations, I have calculated the cost per volume of circulation, excluding the cost of books and binding, as follows :

Cost per Volume of Circulation. — Excluding Cost of Books and Binding.

	1896-97.	1897-98.
Branches	6.7c.	5.9c.
Stations (including reading-rooms) .	7.0c.	4.8c.
Deliveries (excluding reading-rooms)	5.0c.	3.7c.

At the five reading-rooms the cost per volume of circulation, owing mainly to the larger issue, has fallen from 15.5 cents in 1896-97, to 8.3 cents in 1897-98.

The cost per volume of the issue of books on cards from the Central Library through the branches and stations has been.

1894.	1895-96.	1896-97.	1897-98.
11.0c.	11.3c.	11.6c.	8.7c.

But these estimates, which for the sake of comparison with former years, include one-third the cost of maintenance of the reading-rooms charged against this issue from the Central Library, are too liberal. A fairer estimate would allow five cents per volume for the cost of transportation and two and one-half cents per volume for the cost of distribution, giving a total of seven and one-half cents per volume.

BRANCH DIVISION. — CENTRAL LIBRARY.

The Daily Issue.

Our great aim has been to increase the issue of books on cards to the branches and stations, and the first step towards this seemed to be to give the borrower a reasonable chance of securing a book applied for. We have tried to diminish the number of unsuccessful applications (1) by requiring the custodians to see that slips sent in are properly made out; (2) by ascertaining and stamping on the call-slip the reason why the book cannot be supplied, and so cutting off repeated applications for books missing, reserved for hall use, at the bindery, or otherwise unavailable; (3) by having the call-slips stamped by the person handling them in the stacks, at the indicator, in the Children's room, etc.; (4) by supplying copies located on other numbers than those asked for; (5) by introducing a space on the call-slip in which the borrower may request us to supply a substitute if the book he applies for is out; (6) by replacing many books previously condemned or missing — notably those listed in the "Catalogue of English Prose Fiction."

Two publications, the "Supplement to the Fiction Catalogue" and the "Annual List," have helped towards rendering accessible at the stations information of the books contained in the Central Library.

The issue has increased from 40,694 volumes in 1896-97 to 56,534 volumes in 1897-98, a gain of 38.9 per cent. At the same time the percentage of unsuccessful cards has fallen from 57 per cent. to 49.4 per cent., while for the last five months of the year the figure was 44.2 per cent.

Of the books sent, 72 per cent. were fiction, or juvenile; 35 per cent. of those sent to branches and 82 per cent. of those sent to stations being fiction.

Of the unsuccessful cards 72 per cent. were for fiction, including juveniles. Of these unsuccessful applications 48 per cent. of those from the branches and 86 per cent. of those from the stations were for fiction, or juveniles. I am unable to submit figures showing the exact proportion of

these unsuccessful applications which were for *current* fiction, but I can say in a general way that neglecting the unsuccessful applications for a half-dozen recent novels of the very greatest popularity, the proportion has not been large.

Deposit Work.

At the beginning of the year there were twenty-seven places to which deposits of books were sent from the Central Library; at the close, forty-two. The statistics of issue have been:

	1896-97.	1897-98.
Deposits sent to stations, etc.	5,042 vols.	7,244 vols.
Engine-houses	975 "	5,275 "
Totals	6,017 "	12,519 "

There were out on deposit February 1, 1897, 3,906 volumes; February 1, 1898, 5,520 volumes.

A year ago the deposit collection numbered 3,247 volumes, of which about 80 per cent were fiction and juveniles. During the year 1,794 volumes have been added, considerably less than half of which was fiction, making the percentage of fiction and juveniles now in the collection 66 per cent. Below is a rough classification.

	Vols.
Fiction and Juveniles	3,338
Literature	123
Biography	139
History	470
Travel	189
Science, Arts, and Fine Arts	231
Unclassified	551
Total	5,041

The deposit collection is now nearly large enough to supply the miscellaneous collections sent out for circulation at the stations. In this way a great saving of time is effected in selecting the works sent out.

The collection is, however, quite inadequate to supply the requests for deposits on special subjects to be used at the branches, by schools, literary clubs, etc. And this for two reasons, because the collection is composed of books suitable for general reading, and includes few of the heavier works which could not be expected to circulate from the stations; and secondly because practically the whole collection is con-



ROXBURY BRANCH, MILLMONT STREET.

tinually out at the places of deposit, and so unavailable for this special use.

On the other hand, it is often felt that where there are but one or two copies of a book in the circulating collection here, they cannot be spared for two weeks or a month. Frequently the works asked for are restricted to hall use, so that for the past year we have been greatly embarrassed in our attempts to supply these special deposits. I should, therefore, recommend the formation of a special collection to be kept here for just this use.

As we do not yet contemplate sending deposits directly to the schools, it would at first be inexpedient to duplicate books commonly in the branches. But a collection consisting perhaps of five hundred titles chosen with reference to courses of study in the schools, and advertised by a small annotated list sent to the teachers would, I feel sure, meet with instant favor, and lead, incidentally, to better use of the Library by the schools in general. My plan would contemplate sending these deposits for use only at the branches and stations in the beginning, but would undoubtedly lead in the end to systematic work directly with the schools.

With the extension of the deposit system the methods of recording books sent out have necessarily been completely remodeled.

The deposits issued monthly to the engine-houses have been organized into travelling libraries so as to allow of shifting the entire twenty-five volumes from one to another with the least possible inconvenience.

The collection of cards recording books sent out on deposit to the stations was bulky, and growing at the rate of twenty feet a year. Consequently it became urgent to substitute a system simple, compact and more economical to operate. The form of record adopted shows what books are at any station at a given time; what stations a given book has already visited, and whether a given station has had a given book; and, finally, the whereabouts of every book in the deposit collection. The transfer from the old system to the new involved considerable difficulty and, begun in March, was not completed till June.

Then followed a verification of the books charged to each station. This, I understand, was the first general account of stock taken since the first deposit was sent out in 1895, and, owing to defects in records started experimentally and continued by many hands, involved a very great deal of patient, pains-taking labor. Twenty-nine volumes were found to have disappeared, and were paid for by the Custodians of the

stations where they were lost, with the exception of fifteen missing from our own station at Broadway Extension.

After the verification of accounts with stations was completed, a shelf-reading of the whole collection was made in connection with the shelf-list. This was also the first shelf-reading since the books were set aside for deposit, and so covers a period of more than one year.

Of the 5,041 volumes with which a circulation in the neighborhood of 150,000 volumes has been maintained the past year, twenty-one could not be accounted for. Of these we have no record of ever having issued fifteen, so that there is a fair presumption against their ever having been in the possession of the Branch Division, leaving an undoubted loss of but six volumes.

During the year we have been in the habit of exchanging twenty-five volumes monthly with each station. Now that the organization of the work is completed, we have begun to exchange fifty volumes per month, and so to keep the collections on deposit at the stations fresher by the addition of more new material.

INTER-LIBRARY LOANS.

The issue of books loaned to other libraries was put in charge of the Branch Division on September 3. The statistics for the year are:

Loaned:

	Vols.
To libraries in Massachusetts	105
To libraries outside Massachusetts	30
Total inter-library loans	135

Applications denied:

From libraries in Massachusetts	20
From libraries outside Massachusetts	8
Total applications denied	28

Borrowed for use at the Boston Public Library:

From the Boston Athenæum	1
From Cornell University Library	2
From Harvard College Library	13
Total borrowed	16

Twenty-eight applications, or 17 per cent., have been denied because the books could not be issued under the limitations imposed.

SHIPPING DIVISION.

Nineteen branches and stations, the Hancock School, the twenty-one engine-houses, and four other places of deposit are served by our wagons, while eight branches and stations are served by local expresses. These eight stations are so scattered and so distant that for the present local expresses are cheaper and, arriving and delivering earlier, probably give better service than could be obtained from an additional Library wagon.

For miscellaneous bundle work the Merchants' Five-Cent Parcel Delivery is employed, which appears to be cheaper than would be a tricycle carrier owned by the Library.

Respectfully submitted,

HILLER C. WELLMAN,

Supervisor of Branches and Stations.

REPORT OF THE EXAMINING COMMITTEE FOR 1897.

To the Trustees of the Boston Public Library:

The following persons were duly appointed members of the Examining Committee for the year 1897:

Mr. John L. Bates.
Dr. J. Bapst Blake.
Prof. Borden P. Bowne.
Mr. Everett W. Burdett.
Miss Helen Cheever.
Mr. Joseph J. Corbett.
Mr. C. W. Ernst.

Mr. John H. Lee.
Mr. A. Lawrence Lowell.
Rev. Fr. John J. McNulty.
Mrs. Elizabeth F. Parker.
Rev. Leighton Parks.
Mrs. Sarah H. Williamson.
Mr. Frank Wood.

The committee organized by the choice of Mr. Burdett as Chairman and Miss Cheever as Secretary.

Subsequently the following sub-committees were appointed:

On Administration.

Mr. Burdett, *Chairman*.
Miss Cheever.
Dr. Parks.
Fr. McNulty.
Mr. Bates.
Mrs. Williamson.
Mrs. Parker.
Mr. Lowell.
Dr. Blake.

On Branches.

Miss Cheever, *Chairman*.
Professor Bowne.
Mr. Bates.
Mrs. Williamson.
Fr. McNulty.
Mr. Lee.
Mr. Corbett.

On Books.

Dr. Blake, *Chairman*.
Mr. Ernst.
Mrs. Parker.

On Finance.

Mr. Lee, *Chairman*.
Mr. Corbett.
Mr. Wood.

On Printing and Binding Department.

Mr. Wood, *Chairman*.
Mr. Ernst.

On Catalogues.

Mr. Lowell, *Chairman*.
Dr. Parks.
Professor Bowne.

In the appointment of these sub-committees every member, except the chairman of the general committee was put upon two sub-committees, upon the theory that such an arrangement would acquaint each member with the details of the working of the Library better than to serve upon one committee only.

For the purpose of giving the Committee ample time in which to make their investigations and report, the Trustees notified the members of their appointment April 20, 1897. Notwithstanding this fact, the pressure of other matters upon some of the members of the committee made it difficult to procure full attendance at meetings, which, with the necessary unfamiliarity with the details of library administration on the part of most of the members, has made it impracticable to submit the report at as early a date as was desired and anticipated.

Numerous meetings of the several sub-committees have been held, and preliminary and final reports of these committees have been submitted to and considered at meetings of the general committee, which unites in submitting the following report:

ADMINISTRATION.

Fully impressed with the fact stated in the report of our immediate predecessors, that "the vital point of the connection of the Library with the daily needs of the public, and the one that needs to be fashioned and lubricated until the highest possible degree of efficiency is reached, is the placing of the books called for in the hands of the reader within the shortest possible time after the call is indicated," special attention has been given to the inquiry as to how far the book-delivery service has recently been improved, and how far it is capable of further improvement in the near future. While, without doubt, substantial progress has been made in minimizing the time required for the delivery of books after they are called for, very much remains to be desired. While it must be remembered that the volume of work in the way of book-delivery to be done in this Library is so large that no system will reduce the time to the point attainable in smaller institutions, we yet feel that the difficulty which now exists is due chiefly to the structural defects of the delivery system in use. Attention was called in the last report to the necessity of the utmost promptness and expedition on the part of those employed in procuring the books applied for and delivering them to applicants. We know of no present reason

to complain upon this point, but our opinion is that the physical difficulties in the present system of book-delivery cannot be overcome by any personal diligence of the employees. That these difficulties are capable of being overcome if the proper methods of construction are adopted, was made plain by an examination by the Chairman of the Committee of the system in use in the new Congressional Library at Washington. The book-stacks there are nine stories high, and are all directly connected with each other and with the delivery desk in the centre of the Library by a simple but entirely effective endless book-railway. The slips for books are sent in to the stacks by means of pneumatic pressure, and the noise from the use of the pneumatic tubes is not found to be sufficient to disturb the readers. Upon the receipt of the slip, the books are immediately placed in a basket on the continuous railway, and are delivered within two or three minutes from the time they are sent for.

No such promptness of delivery will ever, in our opinion, be attainable in the Boston Library until the stacks are connected with each other and with the delivery desk in a method entirely different from that now in use. This might be done without changing the method of book-delivery, but by simply providing such inter-communication between stacks as would dispense with the present necessity of returning every card to the delivery desk over the same route it took when it left the desk. Any such change, whether to the Washington system of inter-communication and delivery or to a simpler system of inter-communication only, would undoubtedly involve large expense, and might still leave something to be desired; but considering the individual and aggregate loss of time and patience involved in any unnecessary delay in the receipt of books by those applying for them, no reasonable expenditure ought to be avoided, if thereby the time of delivery could be materially shortened.

In last year's report the committee endorsed the application to the Legislature for the passage of an act to authorize the city to borrow the sum of \$100,000 for the completion of the Library building, including the necessary changes to facilitate the delivery of books. Nothing came of this application. But certain changes, involving the expenditure of upwards of \$30,000, will not admit of further delay, if the convenience of the public and the reputation of the Library are to be considered. Some system of direct inter-communication between the stacks—including small elevators to expedite book-delivery, one or more service elevators for handling books in bulk, a supplementary system of pneu-

matic tubes, and, perhaps, a stairway from stack to stack — is imperatively demanded. In connection with these changes, there must be an enlargement of the present tube-room, where the whole work of book-delivery is done, by the addition to it of the room now used by the Librarian's Secretary. The issue of books has reached a volume entirely disproportionate to present facilities. The delivery force is much hampered in its work; the issue at times is clogged, and long delays sometimes occur, to the extreme inconvenience of the public.

Application having been made by the Trustees to the City Government for an appropriation to cover these expenditures, the committee desires to express the opinion that the administration of the Library can never be made to meet the reasonable demands of the public until such an appropriation has been granted, and the suggested changes made.

The new system of filling out cards has been a convenience to the public, but in itself does not seem to have reduced materially the time required for obtaining books. This now averages seven or eight minutes, which is too long, and no pains should be spared to reduce this time to its lowest limit in one way or another.

If it is impractical to make the radical structural changes already suggested, or, at least, to secure the immediate enlargement of the Delivery-room by the addition to it of the room adjoining it, we think it worth while to suggest, as a measure of at least temporary relief, the putting of the delivery-desk, indicator and time-tray into the Delivery-room, and moving farther forward the desk already there. The space now occupied by the fine-desk could be utilized, if required, and that desk transferred to the south-west corner of the room. This would give space enough not only for the present needs, but for a greater number of attendants, in case an increase of force becomes necessary.

The two windows between the Delivery-room and the alcove could be cut down into doors and used for passage. It would then be possible to remove the platform in front of the present door, so that the moving book-shelf, used to carry books into Bates Hall, could be wheeled into the alcove, a change that would save the labor and injury of unloading the books in the Delivery-room and carrying them to the railway in a tray.

While we are desirous of not being misunderstood as suggesting these alterations as adequate for the future, they would cost little, and would temporarily, at any rate, relieve the congestion about the entrance to the alcove, and yet leave ample space in the Delivery-room, which is seldom over-

crowded. We are inclined to the opinion that they would not injure the architectural appearance of that room, though upon this point we would, of course, yield our judgment to that of the architects and artists who would be consulted before any such changes were made.

The overcrowded condition of the Children's room on Saturdays and Sundays, and the fact that there is no quiet corner for the many grammar-school children who come to study, makes it highly necessary, in our opinion, that a second room be devoted to this purpose. We therefore suggest that the plan already under discussion, of taking the Patent room for a second Children's room, be carried out, and that the patent collection be removed to some other room, where the necessary quiet can be secured for those who consult its volumes. If another suitable room cannot be spared for this purpose—as certainly should be done, if possible—a gallery or mezzanine-floor could be constructed at one end of the Newspaper-room, at comparatively small expense. At crowded times the children are already allowed to read at the tables in the Patent-room; but, in order to convert it into a proper room for their use, the committee recommends that more tables and a sufficient number of proper lights be introduced into it; that the room be reserved for the use of children desiring to study or do serious reading; and that a sufficient reference library, containing, among other standard books for school children, dictionaries, encyclopædias, gazetteers, maps and atlases, be placed upon the shelves. A sloping surface should also be arranged in this room for the proper display of maps and pictures. At present there is no collection of reference-books in the Library for children alone; and their time and the time of the attendants is wasted, and the attention of older readers is diverted, by their excursions into Bates Hall, for the purpose of consulting encyclopædias and other books of reference.

Another advantage of having a second room for the use of children is that the fifteen-minute talks to children upon the "Choice of Books," which a majority of our committee consider a desirable addition to the work of the Children's department, could be given in one room, while those readers who preferred not to listen could remain in the other. Some members of the committee, however, believe in omitting these talks altogether, and giving the children the same privilege of quiet which their elders enjoy.

Two sources of disturbance in the Children's room are the registration desk and the entrance to the Newspaper-room, both of which cause the constant passing and repassing of many

persons. We suggest that it would be desirable to find a new place for the registration desk, and to provide another entrance to the Newspaper-room. The Boylston-street entrance might be utilized for the latter purpose, and some interior communication found or provided between the Newspaper-room and the other portions of the Library. The latter should not involve the use of the Children's room or any other room where quiet is desirable.

The last suggestion with regard to this department is easily carried out: The Children's room should contain at least one clock. Indeed, throughout the building there is a dearth of necessary time-pieces.

Two matters mentioned in the report of the last Examining Committee still provoke criticism; one is the poor lighting of the Newspaper-room, which remains as described in the last report; the other is in the provision of towels for use in common in the lavatories. While both of these reforms would involve additional expense, we feel that they deserve attention.

BRANCHES.

The committee notes with satisfaction marked improvement in the conduct of the branches and deposit stations, and increase in their circulation of books.

Of the thirteen delivery stations only one is now without a deposit of books. These deposits seem particularly well chosen. Regular deposits of books are also made at thirteen engine-houses, the Marcella-street Home, the House of Reformation, two Industrial Schools and at a Men's Reading room in the North End. Books are regularly delivered at the Hancock School, and are shortly to be delivered also at the Eliot School, North End.

In branches and reading-rooms an increased number of books placed upon open shelves tempts visitors to read upon the premises. The circulation of books in branches has increased 50,000 during the year, while that of deposit stations has almost doubled. The circulation of books from the Central Library through branches and stations has increased 15,840 during the year; and of the persons who apply thus for the books of the Central Library, thirteen per cent. more are successful than at this time a year ago.

It is gratifying to note that the use of reference-books in all branches and stations by school children is rapidly growing.

Among the improvements we have noted, the following deserve special mention:

Station P on Broadway — thanks to the appropriation of last year — now deserves to be called a reading-room. Its seats will accommodate forty-five readers; it has 1,700 books upon open shelves; and its circulation of books was 27,483 during the year.

The new Station T at Boylston meets a large demand.

The North End will now be supplied from two grammar schools and the Men's reading-room.

Card catalogues have been completed at the Roxbury, West Roxbury and South End Branches, and work on card catalogues is going on at other branches. A new finding-list has been issued from each branch. The West End Branch leads all the others in its circulation of books, having made a gain of 27,483 during the year. This shows what may be accomplished in a branch which is well situated and well equipped.

The service at Brighton and East Boston has become more effective under the custodians now in office. In East Boston, however, little further can be accomplished in the present quarters.

The committee makes the following recommendations, which it considers of importance:

The conditions in East Boston remain unchanged, and the need for improvement has become more pressing. We renew our recommendation of last year, and make it first, namely:

1. That a special appropriation be granted to relocate and properly equip the East Boston Branch.

2. We renew our recommendation for the removal of the South End Branch to Washington street.

3. We think a new deposit station near Northampton street desirable. After this is established, we advise

4. That the next deposit station be placed in the North End.

5. The Library certainly does not benefit the public by offering the opportunity to read in light injurious to sight. We find the lighting of several branches insufficient, — notably, East Boston, Jamaica Plain, South End, Charlestown, West Roxbury, and the lower floor of the Roxbury Branch. We urge immediate improvement in these conditions.

The committee finds that the office of Supervisor of Branches, which was created a year ago, has amply justified itself. The attention to the needs of the branches and stations and the careful supervision thus made possible have increased the efficiency of these parts of the Library system.

BOOKS.

The committee believes that the collection of books at present in the Library represents moderately well the tastes and needs of the people of Boston and vicinity.

The committee recognizes the difficulties in the judicious purchase of books for a library which already possesses 500,000 volumes. The principle now in practice should be adhered to, and if practicable, extended, — that is, the four great libraries of Boston and Cambridge and the several special libraries in Boston should avoid unnecessary duplication, and should develop certain lines of subjects in which each should endeavor to be exhaustive.

Among the special subjects upon which the Boston Library should be as complete as possible, the committee mentions especially the Literature of Boston and the immediate vicinity (the Metropolitan Boston) in every aspect from which this locality can be viewed, — commercial, religious, educational, geographical, historical, etc., etc. Possibly some relations might be established between the Library and the great business interests of the city which would render additional services to the man of affairs and business. The Library should have a copy of every newspaper published in Boston up to the time that the city charter was adopted.

It does not seem advisable that the Library should aim at complete collections of the literature of Law, Medicine, etc., but should content itself with the recognized text-books and authorities on these subjects.

The present collection of maps is perhaps less complete than most other subjects, and should be enlarged.

Rare and valuable books should, as far as possible, be limited to the use of persons who can appreciate and take proper care of them, and should never be issued, even for hall use, to children unaccompanied by responsible persons.

The number of books of reference, dictionaries, encyclopædias, etc., in all principal departments of the Library should be increased, if practicable.

The suggestion is offered, whether it might not be well to start a card catalogue of desirable books for purchase. Such a list might, perhaps, give strength to the policy of the Library in pursuing a fixed course through the ephemeral pressure now exercised by indiscriminate suggestions from all quarters.

The effort to meet the popular demand in art instruction, especially by the purchase of photographs, is highly appreciated. The Library was never so active, so helpful and so comprehensive in this respect as it is to-day.

CATALOGUES AND BULLETINS.

In the matter of catalogues and bulletins the committee has few suggestions to make. The special subject lists, which are printed by the Library more and more freely, are of high value, and it is a pity that they are not more generally used. In spite of constant efforts to bring them to the attention of the public, some readers, interested in the subjects which they cover, still use the Library without knowing that any such lists exist. They can be found on shelves in the Catalogue-room of Bates Hall; but there is nothing to indicate their presence. A sign over the shelves would perhaps help to attract attention to them.

In this connection another suggestion about the special lists may be made. Those which deal with subjects of permanent interest gradually lose their value, unless kept up to date. This is true, for example, of the lists in Electricity and on the Telephone, published in 1892 and 1893. In such cases cards with the titles of later works are often collected, but they are kept in the Catalogue Department. Whenever this is done, it would be a benefit to the public to have a duplicate collection of the cards placed in the Catalogue-room in Bates Hall in a special drawer, distinctly marked with the name of the subject, so that any one at work on the matter may easily find titles that carry the special list down to date.

It is not, perhaps, out of place to point out that although a card catalogue is probably the most convenient method now in use of keeping the titles of books constantly arranged in alphabetical order, yet it is, after all, a crude and clumsy system. It has several defects. In the first place, the time wasted in consulting it is not inconsiderable; for a hundred titles can be run down on a printed page with vastly greater rapidity than the same number of cards can be turned over. In the second place, it is perishable. The catalogue in Bates Hall might be burnt up, and even if the duplicate in the room underneath should escape, the expense of copying it would be very great. A third, and by far the most important, defect in the card catalogue is the fact that it can be kept only in one place, and this, with the present endeavor to extend the use of the Library as widely as possible, is a grave disadvantage. These defects would be entirely done away with if the titles of books could be kept in such a form that they could be used mechanically for printing. The most obvious suggestion is that the slugs, made

by means of the linotype, and from which the cards are now printed, should be preserved in alphabetical order. In that case the type for the catalogue would be always set up, and the printing could be done from time to time at comparatively small expense. The amount of metal required for this purpose is, however, so great as to make it impracticable; but the Chief of the Printing Department of the Library is of opinion that a process for accomplishing this result is likely to be perfected in the near future. If this proves to be true, it is to be hoped that the Library will put the system into operation, even at a large initial expense, for the value of the catalogue would be vastly increased thereby. It could be wholly reprinted in book form every few years, and brought down to date by annual supplements and monthly bulletins. Copies would, of course, be placed in the branches as well as in Bates Hall. Moreover, when the system had been generally adopted, a catalogue of every important library would be found in every other, and this would not only help to save money by avoiding duplication of sets of books which are expensive and rarely used, but would enable scholars to get the full benefit of all the collections of books throughout the country.

PRINTING AND BINDING DEPARTMENTS.

After a thorough examination of the system of audit applied to the financial operations of the Library, the committee of last year reported that it was excellent and comprehensive, but that it would be advisable, if practicable, to have the expenditures in the Binding and Printing Departments examined by some disinterested person not connected with the Library, — preferably a member of the Examining Committee, especially appointed for that purpose, and familiar with the market-rates of labor, material and supplies for which payments are made.

This suggestion was adopted by the Trustees, and a thorough examination of the financial and business operations of these departments has been made. Methods of work, cost of material, economy of administration, etc., have been looked into carefully, with the result that the departments in question are found to be in excellent condition.

The only important defect noted in these departments was a lack of system in keeping an account of stock which could be easily audited, and would be self-balancing, so that discrepancies or waste could be instantly detected, if the books were properly kept. Such a system should show an account

of all stock received, and all stock used, and for what used, together with the exact amount and kind left on hand at any time.

Upon the desirability of such a system being suggested to the heads of these departments, they approved of the change, and took steps to procure the proper books to put it into operation. Sufficient time has not yet elapsed to judge of the measure of success which will attend this addition to the otherwise satisfactory system of audit in use in the Library administration, but we have no doubt that it will prove permanently useful and satisfactory.

IN GENERAL.

We assume that the Examining Committee is, as suggested by our immediate predecessors, "a portion of the machinery to be examined and commented upon," and we are of opinion that, as at present constituted, it is not as efficient a piece of machinery as it ought to be. Last year's committee pointed out the difficulties, which, under existing conditions, minimize the usefulness of its work, but refrained from making any suggestion as to the solution of those difficulties. We venture to go one step further, by suggesting at least one method of securing an improvement.

Every committee as now appointed is, practically, a new committee. While some of its members may have served before, it was with no assurance of reappointment. In the discharge of their duties they are under the impression from the first that their service is but temporary, and, for that reason, their investigations are likely to be superficial. A new member of the committee immediately recognizes the fact that he is a tyro or amateur, so to speak, in the subjects submitted to his consideration, and is discouraged at the outset in any attempt to make himself intelligently acquainted with the broad principles and the numerous details of library administration. A sense of dependence upon others, especially upon the Librarian and heads of departments, for any intelligent understanding of the problems presented for consideration, attaches to the inception and accompanies the prosecution of the work of the average member of the committee.

One way of remedying this manifest defect in the system of outside examination would be to make membership on the committee less temporary than it is. If, for example, the committee should always consist of fifteen members, each to serve for three years, and only five of whom should annually

retire to make room for five new members, the character of the work of the committee would, in our opinion, be more satisfactory to its members, if not to the Trustees and the public.

We also desire to suggest the query whether it is best that the report of the Examining Committee should always be printed in connection with the report of the Trustees. The committee's report is to the Trustees and for their benefit; and the object of the report might be as well or better accomplished by its submission, in print, to the Trustees, without the necessity of its subsequent publication in the annual report. If the committee's report were not to be made public, the committee might be inclined to speak more freely and frankly upon some topics than they otherwise might think advisable; and some matters of real, but perhaps temporary, importance might be included, which might not be thought to merit a permanent place in the annual report of the Trustees. We are aware that the printing of the report of the Examining Committee is now required by an ordinance of the city; but this should be repealed or amended, if its present requirement is inconsistent with good practice. We suggest that the ordinance should leave the printing of each report of the Examining Committee discretionary with the Trustees.

In closing this report, we cannot refrain from commending the improvement in the administration of this great public institution from year to year. The standard of excellence is all the time advancing. Repeated visits to the Library and examinations of its various departments by the individual members of the committee have discovered, as a rule, efficient administration united with commendable courtesy. Our citizens may well be proud of such an institution, "built by the people, and dedicated to the advancement of learning."

Respectfully submitted,

For the committee,

(Signed) EVERETT W. BURDETT, *Chairman*.

(Signed) HELEN CHEEVER, *Secretary*.

BOSTON, April 4, 1898.

APPENDICES.

1897.

LIST OF APPENDICES.

- I. FINANCIAL STATEMENT.
- II. EXTENT OF THE LIBRARY BY YEARS.
- III. NET INCREASE OF THE SEVERAL DEPARTMENTS, INCLUDING BRANCHES.
- IV. CLASSIFICATION: CENTRAL LIBRARY.
- V. CLASSIFICATION: BRANCHES.
- VI. REGISTRATION.
- VII. CIRCULATION.
- VIII. TRUSTEES FOR FORTY-SIX YEARS. LIBRARIANS.
- IX. EXAMINING COMMITTEES FOR FORTY-SIX YEARS.
- X. LIBRARY SERVICE (MAY 1, 1898), INCLUDING SUNDAY AND EVENING SCHEDULE.
- XI. SYSTEM OF SERVICE.
- XII. CORRESPONDENCE, ETC.
- XIII. GIVERS, AND AMOUNT OF GIFTS.
- XIV. ORDERS OF CITY COUNCIL.

APPENDIX I.

FINANCE.

BOSTON PUBLIC LIBRARY,
AUDITING DEPARTMENT, February 1, 1898.*To the Trustees:*

GENTLEMEN: The undersigned herewith presents a statement of the receipts and expenditures of the Library Department for the financial year commencing February 1, 1897, and ending January 31, 1898; also a statement concerning the trust and other funds, statements covering special appropriations, and a statement of expenditures on account of the branches for the twelve years ending 1897-98.

Respectfully,

A. A. NICHOLS,
Auditor.

RECEIPTS.

City appropriation, 1897-98	\$235,000 00	
Rent from old Library Building:		
Balance from 1896-97	\$2,274 05	
During the year	8,600 00	
		10,874 05
Fines and sales of catalogues:		
Balance from 1896-97	\$532 89	
During the year:		
Fines	\$4,532 28	
Sales	441 30	
Lost cards	118 16	
		5,091 74
		\$5,624 63
Less amount transmitted to J. S. Morgan & Co., London. (See <i>infra</i> , p. 84)	4,600 00	
		1,024 63
Income from Trust Funds:		
Balance from 1896-97	\$121 00	
During the year ¹	13,755 21	
<i>Carried forward</i>	\$13,876 21	\$246,898 68

¹ The interest due on Trust Funds invested in City of Boston Bonds from July 1, 1896, to January 1, 1897, amounting to \$4,356, was not placed to the credit of the Library Trustees until after January 31, 1897. The income from Trust Funds for the year is \$9,399.21.

<i>Brought forward</i>	\$13,876 21	\$246,898 68
Less amount transmitted to J. S. Morgan & Co., London. (See <i>infra</i> , p. 84)	9,008 21	
		4,868 00
London accounts :		
Balance in hands of J. S. Morgan & Co., February 1, 1897 :		
Trust Funds income, \$13,980 72		
City appropriation . 7,242 96		
Interest 178 00		
		\$21,401 68
During the year :		
Trust Funds income. (See <i>supra</i> , p. 84)	9,008 21	
City appropriation. (See <i>supra</i> , p. 83)	4,600 00	
Interest	311 39	
		35,321 28
Balance in hands of Baring Bros. & Co., February 1, 1897		72 75
Donations :		
From W. C. Todd, unexpended February 1, 1897. (See Table, <i>infra</i> p. 93)	\$2,950 10	
Additional credit	3 00	
		\$2,953 10
From Woman's Education Association, unexpended February 1, 1897	22 27	
From Andrew C. Wheelwright, unexpended February 1, 1897	3 10	
From Twentieth Regiment Association	775 03	
From Boston Numismatic Society, ...	300 00	
From Elizabeth Lewis	26 00	
From sundry sources for the purchase of photographs	1,321 00	
		5,400 50
Exchange account : lost books, sales of duplicates, etc. :		
Balance from 1896-97	\$776 08	
During the year	312 54	
		1,088 62
Interest on bank deposit		1,488 25
<i>Carried forward</i> , ...		\$295,138 08

Brought forward \$295,138 08

EXPENDITURES.

The expenditures have been as follows:

General library accounts, including the
cost of maintaining the branches:

Salaries:

General administra-
tion . . .

\$122,109 68

Sunday and evening

force . . . 17,386 11

\$139,495 79

Books:

City appropriation, \$25,801 12

Income from Trust

Funds . . . 8,114 74

33,915 86

Periodicals

6,435 76

Binding:

Salaries . . . \$11,960 65

Stock . . . 1,623 17

Equipment . . . 296 53

Contract work \$3,802 11

Contract work,

(British patent
specifications.)

378 75

4,180 86

18,061 21

Printing:

Salaries . . . \$4,651 67

Stock . . . 1,337 97

Equipment . . . 4,100 97

Contract work . . . 1,331 97

11,422 58

Furniture and fixtures . . .

1,871 42

Gas

1,673 58

Electric lighting

1,991 03

Expense, miscellaneous . . .

858 33

Expense, cleaning

5,424 92

Stationery and library supplies .

3,973 98

Rents: Branch Libraries and Read-
ing rooms

5,215 00

Fuel

9,123 03

Repairs: stock and contract work .

2,507 58

Transportation, including postage .

3,086 36

Transportation, between Central
Library, Branches and Delivery

Stations 3,491 04

Delivery Stations, service . . .

3,990 85

Water-rates

1,455 80

Telephone service

355 45

Carried forward \$254,349 57 \$295,138 08

<i>Brought forward</i>	\$254,349 57	\$295,138 08
Subscriptions to newspapers (Todd gift)	2,643 06	
Books (Lewis gift)	17 50	
Exchange account:		
Books and odd numbers of periodicals	\$31 72	
Refunded for books returned	20 48	
		52 20
Books and periodicals for West End Branch:		
Woman's Education Association and A. C. Wheelwright gift	23 50	
Photographs	1,235 79	
Twentieth Regiment Association gift:		
Books	\$407 03	
Special service	368 00	
		775 03
		\$259,096 65
Balance on hand January 31, 1898		<u>\$36,041 43</u>
The balance is made up of the following items, viz.:		
Cash in City Treasury:		
Income from Trust Funds	\$4,868 00	
Rent from old Library Building	356 89	
		\$5,224 89
Cash on deposit in London:		
In hands of J. S. Morgan & Co.:		
Trust Funds	\$14,628 19	
General funds	12,573 92	
Interest less commission and postage, ...	311 39	
Photograph fund	42 21	
		\$27,555 71
In hands of Baring Bros.	72 75	
		27,628 46
Cash on deposit with New England Trust Co., and on hand:		
Unexpended of donations carried to account of 1898-99:		
Wm. C. Todd	\$310 04	
Woman's Education Association	1 87	
Elizabeth Lewis	8 50	
Boston Numismatic Society	300 00	
		620 41
Exchange account: lost books, etc.		1,036 42
Interest on bank deposit		1,488 25
Photograph fund		43 00
		<u>\$36,041 43</u>

GENERAL APPROPRIATIONS.

Comparative statement for fiscal years ending January 31, 1896, 1897 and 1898.

	1895-96.	1896-97.	1897-98.
Salaries: General administration.....	\$93,904 80	\$113,004 21	\$119,698 26
“ Sunday and evening force.....	11,130 60	17,558 07	17,386 11
Binding: Salaries.....	10,626 87	11,847 64	11,960 65
“ Stock.....	2,406 14	1,504 61	1,623 17
“ Contract work.....	1,718 54	1,420 72	3,802 11
“ Equipment.....	.....	488 75	296 53
Books.....	18,231 86	25,040 32	26,486 83
Periodicals.....	5,307 49	6,049 10	6,435 76
Furniture and fixtures.....	8,428 84	1,195 78	1,871 42
Gas.....	1,729 76	1,790 90	1,673 58
Electric lighting and power.....	4,758 42	1,576 85	1,991 03
Water-rates.....	595 00	1,374 50	1,455 80
Telephone service.....	480 11	390 72	355 45
Expense: Miscellaneous.....	3,894 54	1,473 76	858 33
“ Cleaning.....	3,870 55	4,612 68	5,424 92
Printing: Equipment.....	5,300 00	2,774 89	4,100 97
“ Stock.....	1,012 92	4,301 64	1,337 97
“ Contract work.....	4,960 44	1,517 10	1,331 97
“ Salaries.....	485 00	3,761 99	4,651 67
Stationery and Library supplies.....	3,200 40	3,996 26	3,973 98
Fuel.....	6,192 07	6,585 01	9,123 03
Rents.....	6,285 48	4,884 00	5,215 00
Repairs: Stock and contract work.....	1,987 29	3,689 24	2,507 58
“ Salaries.....	2,699 00	2,049 83	2,411 42
Transportation, postage, etc.....	3,769 25	1,969 13	3,086 36
Transportation between Central Library and Branches.....	3,285 43	3,562 25	3,491 04
Rent of deliveries, including Custodians' services.....	2,347 25	3,105 38	3,990 85
	\$208,608 05	\$231,525 33	\$246,541 79

NOTE.—Gross expenditure for the year 1895-96 includes payments made from the balance of the special appropriation for “moving expenses, \$6,341.12,” distributed among the appropriate items, and payments from the revenue from the old Library Building for the West End and Mattapan Branches.

The cost of maintaining the branches makes part of the general items of the several appropriations:

Cost of Branches, 1895-96	\$47,997 23
Cost of Branches, 1896-97	62,785 39
Cost of Branches, 1897-98	58,282 49

Amount expended for books is for bills paid out of the city appropriation only.

The amount expended for books and binding (not included above) paid from trust funds and city money in hands of London bankers:

For 1895-96	\$9,516 29
For 1896-97	9,590 82
For 1897-98	7,807 78

SPECIAL APPROPRIATIONS.

Library Building, furnishing:

Balance of city appropriation	.	.	.	\$24,539 96
Payments on account:				
Mellish, Byfield & Co.	.	.	\$4,823 13	
Edward F. Caldwell	.	.	2,200 00	
C. H. McKenney & Co.	.	.	562 40	
J. Eastman Chase	.	.	264 92	
Koopman & Co.	.	.	175 00	
Thomas O'Callaghan & Co.	.	.	151 33	
Archer & Pancoast Co.	.	.	110 00	
E. C. Morris Safe Co.	.	.	72 00	
J. B. Hunter & Co.	.	.	67 66	
Geo. E. Crawley.	.	.	58 85	
Wm. F. Adams & Co.	.	.	54 50	
James I. Wingate & Co.	.	.	50 32	
R. H. Hoe & Co.	.	.	48 75	
Wm. A. Carrie	.	.	22 05	
Paine Furniture Co.	.	.	20 00	
Richard Codman.	.	.	17 50	
Sundry small accounts	.	.	111 54	
				8,809 95
				<u>\$15,730 01</u>

Branch Library, Broadway Extension, Improvements:

City appropriation	.	.	.	\$5,000 00
Payments on account:				
Books	.	.	\$480 84	
Furniture and fixtures	.	.	528 10	
Moving expenses	.	.	1 50	
				1,010 44
Balance, February 1, 1898	.			<u>\$3,989 56</u>

LIBRARY BUILDING, DARTMOUTH STREET.

From July 1, 1887, to January 31, 1897.

CONTRACTS.	Amount Contracted for.	Amount Certified and Paid.	Balance Uncertified.
John T. Scully.....	\$7,714 44	\$7,714 44	
Woodbury & Leighton, 1st contract.....	313,596 79	313,596 79	
Woodbury & Leighton, 2d contract.....	756,233 87	756,233 87	
R. C. Fisher & Co.....	48,784 40	48,784 40	
R. Guastavino	85,544 04	85,544 04	
Lindemann, T. C. R. T. Co.....	35,209 54	35,209 54	
Batterson, See & Eisele.....	57,273 00	57,273 00	
Post & McCord, 1st contract.....	43,662 43	43,662 43	
Post & McCord, 2d contract	50,900 00	50,900 00	
David McIntosh, 1st contract.....	48,716 81	48,716 81	
David McIntosh, 2d contract	20,823 00	20,823 00	
Bowker, Torrey & Co.....	110,459 00	110,459 00	
Ira G. Hersey.....	90,705 70	90,705 70	
Snead & Co., Iron Works.....	76,419 75	76,419 75	
Norcross Bros.....	52,857 00	52,857 00	
General Electric Co.....	21,440 39	21,440 39	
Isaac N. Tucker.....	8,952 43	8,952 43	
M. T. Davidson	3,894 00	3,894 00	
Augustus St. Gaudens.....	50,000 00	3,000 00	\$47,000 00
Archer & Pancoast Co.....	15,122 80	15,122 80	
John S. Sargent.....	15,000 00	7,500 00	7,500 00
E. A. Abbey	15,000 00	9,500 00	5,500 00
P. Puvis de Chavannes.....	48,235 00	48,235 00	
Bethlehem Iron Works	1,617 40	1,617 40	
Freight on electrical machine (Knight & Son),	78 10	78 10	
Siemens & Halske	14,000 00	14,000 00	
I. P. Morris Co.....	13,889 86	13,889 86	
W. J. McPherson	5,158 91	5,158 91	
N. E. Tel. and Tel. Co.....	997 12	997 12	
D. C. French.....	25,000 00	3,000 00	22,000 00
E. E. Garnsey.....	2,500 00	2,500 00	
E. D. Leavitt.....	6,933 92	6,933 92	
Lake Erie Engineering Works.....	1,443 33	1,443 33	
<i>Carried forward</i>	<i>\$2,048,163 03</i>	<i>\$1,906,163 03</i>	<i>\$82,000 00</i>

LIBRARY BUILDING, DARTMOUTH STREET.— *Concluded.*

CONTRACTS.	Amount Contracted for.	Amount Certified and Paid.	Balance Uncertified.
<i>Brought forward</i>	\$2,048,163 03	\$1,966,163 03	\$82,000 00
Walworth Construction and Supply Co.....	{ 1,975 00 755 66	1,975 00 755 66	
Siemens & Halske	4,077 71	4,077 71	
A. A. Sanborn	398 00	398 00	
Norcross Bros.....	597 00	597 00	
Wm. Lumb & Co.....	429 19	429 19	
Henry R. Worthington	247 00	247 00	
C. H. McKenney & Co.	255 00	255 00	
David McIntosh	150 00	150 00	
S. D. Hicks & Son	85 00	85 00	
S. Homer Woodbridge.....	53 78	53 78	
Daniel G. Finnerty	50 00	50 00	
Furniture	26,107.82	26,107 82	
Construction	50,387 77	50,387 77	
Heating and ventilating	70,457 06	70,457 06	
Incidentals.....	66,878 48	66,878 48	
A. S. Jenney & T. A. Fox	704 80	704 80	
Architects' commission of 5 per cent.....	97,624 72	97,624 72	
Architects' commission of 7½ per cent.....	5,027 25	5,027 25	
	\$2,374,424 27	\$2,292,424 27	\$82,000 00
Appropriation			\$2,368,854 89
Payments			2,292,424 27
			\$76,430 62
Balance uncertified.....		\$82,000 00	
Claim of McKim, Mead & White, architects, for commission according to statement June 10, 1895		8,685 61	
			90,685 61
Deficit.....			\$14,254 99

LONDON ACCOUNTS.

	Balances from 1896-97.	Remit- tances, 1897 98.	Total Credits.	Expendi- tures, 1897-98.	Balances unex- pended.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
J. S. Morgan & Co.,	4,403 7 0	2,803 8 6	7,206 15 6	1,609 1 7	5,597 13 11
J. S. Morgan & Co., photograph fund, ...		263 6 0	263 6 0	254 12 1	8 13 11
J. S. Morgan & Co., interest on de- posit					64 4 1
Baring Bros. & Co.,	15 0 0		15 0 0		15 0 0
	4,418 7 0	3,066 14 6	7,484 1 6	1,863 13 8	5,685 11 11

STATEMENT OF TRUST FUNDS.

GIVER.	Principal.	Balances from 1896-97.	Income, July, '96, to January, '98.	Total Credits.	Expenditures, 1897-98.	Balances to 1898-99.	Over- expended.
1. Joshua Bates.....	\$50,000 00	\$1,272 39	\$3,000 00	\$4,272 39	\$2,214 23	\$2,058 16	
2. Jonathan Phillips.....	30,000 00	2,055 28	2,400 00	4,455 28	1,130 46	3,324 82	
3. Albert Lawrence.....	10,000 00	1,897 64	900 00	2,797 64	549 28	2,248 36	
4. Charlotte Harris.....	10,000 00	3,988 21	900 00	4,888 21	.....	4,888 21	
5. Henry L. Pierce.....	5,000 00	212 63	300 00	512 63	132 89	379 74	
6. Mary P. Townsend.....	4,000 00	458 82	300 00	758 82	85 75	673 07	
7. George Ticknor.....	4,000 00	.....	240 00	.....	.....	.....	1 \$13 27
8. John P. Bigelow.....	1,000 00	256 30	60 00	316 30	36 30	280 00	
9. Franklin Club.....	1,000 00	32 64	60 00	92 64	5 81	86 83	
10. Samuel A. Green.....	2,000 00	150 07	142 50	332 57	36 00	296 57	
11. South Boston.....	100 00	.....	6 00	.....	.....	.....	35 03
12. Arthur Scholfield.....	50,000 00	2,334 49	3,708 00	6,042 49	2,493 25	3,549 24	
13. Joseph Scholfield.....	11,800 00	.....	.....	.....	.....	.....	
14. Thomas B. Harris.....	1,000 00	61 85	60 00	121 85	.....	121 85	
15. Daniel Treadwell.....	6,150 00	578 02	648 50	1,226 52	983 65	242 87	
16. Edward Lawrence.....	500 00	25 11	30 00	55 11	.....	55 11	
17. J. Ingersoll Bowditch.....	10,000 00	728 27	525 00	1,253 27	235 06	1,018 21	

18. Family of Charles Greely Loring.....	500 00	10 00	30 00	40 00	.....	40 00
19. Charles Mead.....	2,500 00	.....	100 00	100 00	.....	100 00
20. Victorine T. Artz.....	10,000 00	.....	325 21	325 21	212 06	113 15
21. Papyrus Club (John Boyle O'Reilly memorial fund).....	1,000 00	.....	20 00	20 00	.....	20 00
22. Twentieth Regiment Association.....	5,000 00	.....	.....	2,953 10	2,643 06	310 04
23. William C. Todd.....	50,000 00	2,953 10	.....	.....	.....	.....
	\$206,350 00	\$17,054 82	\$13,755 21	\$30,564 03	\$10,757 80	\$19,806 23
						\$48 33

¹ Over expenditures of previous years \$253.27 less amount of income for 1897.

NOTE. — For some time previous to this year Mr. William C. Todd annually had presented \$2,000, being the assumed income of \$50,000; but on the 27th of October, 1897, he presented the principal, \$50,000, which becomes now one of the Trust Funds, the income of which is to be expended annually in the purchase of newspapers.

EXPENDITURES FOR BRANCHES AND DELIVERY STATIONS, 1880-98.

	1886-87.	1887-88.	1888-89.	1889-90.	1890-91.	1891-92. 9 mos.	1892-93.	1893-94.	1894-95.	1895-96.	1896-97.	1897-98.
EAST BOSTON.												
Salaries	\$2,898 18	\$3,148 96	\$2,577 60	\$3,649 15	\$2,643 83	\$1,878 10	\$2,588 49	\$2,528 49	\$2,835 31	\$2,814 68	\$2,891 92	\$2,849 07
Books	592 06	422 12	384 28	338 22	255 55	417 68	513 79	288 87	350 85	842 14	920 38	763 00
Expense	717 65	684 14	698 73	483 02	999 90	604 96	757 05	764 83	621 15	600 45	709 53	713 06
	\$4,207 89	\$4,255 23	\$3,960 61	\$3,470 39	\$3,899 28	\$2,900 74	\$3,859 33	\$3,582 19	\$3,816 31	\$4,266 27	\$4,521 83	\$4,325 13
SOUTH BOSTON.												
Salaries	\$3,285 17	\$3,516 63	\$3,304 05	\$3,057 13	\$2,904 60	\$2,306 95	\$3,359 11	\$2,996 30	\$3,271 83	\$3,249 45	\$3,498 40	\$3,626 70
Books	951 07	763 17	774 43	642 08	448 46	707 85	783 56	573 23	771 37	898 75	1,819 38	873 32
Expense	656 77	518 60	2,620 53	2,748 16	3,172 57	3,102 20	3,054 57	3,328 14	3,142 26	3,624 76	3,804 63	3,178 25
	\$4,893 01	\$4,798 40	\$7,699 51	\$6,447 37	\$6,525 63	\$6,117 00	\$7,227 24	\$6,897 67	\$7,185 56	\$7,772 96	\$9,122 41	\$7,678 27
ROXBURY.												
Salaries	\$2,863 72	\$3,724 58	\$3,514 01	\$3,336 47	\$3,154 69	\$2,301 35	\$3,382 30	\$3,121 85	\$3,262 95	\$3,161 55	\$3,447 72	\$3,475 98
Books	754 06	726 40	675 76	457 34	452 94	442 75	774 26	396 77	494 49	658 42	1,332 09	436 75
Expense	1,136 70	1,176 32	2,039 52	2,434 61	2,725 27	2,675 43	2,310 20	2,657 53	2,526 12	3,000 15	2,678 90	2,971 12
	\$4,754 48	\$5,627 30	\$7,129 29	\$6,228 42	\$6,332 90	\$5,419 53	\$6,466 76	\$6,476 15	\$6,283 56	\$6,820 12	\$7,458 71	\$6,883 85
CHARLESTOWN.												
Salaries	\$2,599 61	\$2,848 01	\$2,654 77	\$2,623 67	\$2,738 52	\$1,950 18	\$2,608 83	\$2,201 90	\$2,596 88	\$2,397 53	\$3,008 51	\$2,845 22
Books	996 85	733 84	672 11	583 39	604 78	375 17	689 15	386 00	423 64	835 91	1,256 10	646 11
Expense	774 35	909 38	924 80	871 99	868 86	872 93	974 89	1,105 35	786 05	913 62	1,035 78	855 24
	\$4,370 81	\$4,491 23	\$4,251 68	\$4,079 05	\$4,212 16	\$3,198 28	\$4,272 87	\$3,693 25	\$3,806 57	\$4,147 06	\$5,300 39	\$4,346 57

BRIGHTON.

Salaries.....	\$1,713 34	\$1,713 39	\$1,592 55	\$1,562 20	\$1,134 87	\$1,758 88	\$1,687 77	\$1,872 00	\$1,898 00	\$2,040 75	\$2,117 97
Books.....	277 16	338 02	264 50	96 44	214 44	172 61	126 80	254 54	741 00	1,063 73	752 22
Expense.....	762 33	749 61	846 90	1,202 97	1,111 39	778 21	1,048 23	584 80	592 89	1,218 05	844 74
	\$2,612 54	\$2,800 97	\$2,724 79	\$2,862 11	\$2,460 70	\$2,709 70	\$2,862 80	\$2,711 34	\$3,281 89	\$4,322 33	\$3,714 93

DORCHESTER.

Salaries.....	\$2,531 00	\$2,840 83	\$2,622 80	\$2,344 51	\$2,129 31	\$1,637 12	\$1,918 94	\$2,067 41	\$2,211 16	\$2,691 33	\$2,663 31
Books.....	738 21	734 69	673 10	425 95	293 67	386 22	331 33	464 05	806 05	1,310 70	704 82
Expense.....	633 23	603 96	804 76	966 74	1,015 23	703 60	632 50	488 00	700 25	687 57	661 08
	\$3,902 44	\$4,179 48	\$4,100 66	\$3,737 20	\$3,438 21	\$2,571 17	\$2,882 77	\$3,019 46	\$3,717 44	\$4,689 60	\$4,029 21

SOUTH END.

Salaries.....	\$2,713 22	\$2,526 84	\$2,301 87	\$2,246 81	\$2,186 75	\$1,544 40	\$1,869 93	\$2,127 27	\$2,239 76	\$2,344 25	\$2,352 67
Books.....	721 02	451 90	500 22	485 78	321 87	514 80	538 01	467 74	574 76	1,254 04	738 20
Expense.....	733 44	385 97	900 14	906 79	602 46	910 43	1,128 38	684 28	537 32	465 21	689 96
	\$4,187 68	\$3,364 71	\$3,702 23	\$3,639 38	\$3,111 08	\$2,969 63	\$3,536 32	\$3,279 29	\$3,351 84	\$4,063 50	\$3,780 83

JAMAICA PLAIN.

Salaries.....	\$1,788 36	\$2,028 35	\$1,854 50	\$1,834 65	\$1,675 13	\$1,974 97	\$1,677 67	\$1,943 57	\$2,023 52	\$2,099 95	\$2,131 85
Books.....	594 75	542 25	601 69	365 57	374 05	589 54	263 37	349 96	723 58	1,174 27	763 37
Expense.....	1,437 69	1,609 97	888 55	884 67	838 17	774 14	795 11	839 10	702 25	836 26	841 30
	\$3,820 80	\$4,180 57	\$3,344 74	\$3,084 89	\$2,887 35	\$2,633 88	\$2,964 79	\$3,132 63	\$3,449 35	\$4,110 48	\$3,736 52

NORTH END.

Salaries.....	\$1,206 66	\$1,426 31	\$1,326 00	\$1,284 00	\$1,416 50	\$1,025 75	\$1,389 00	\$1,529 41	(6 mos.) \$658 83		
Books.....	86 98	28 80	81 10	77 27	85 03	252 10	148 24	122 35	11 38		
Expense.....	480 73	427 44	957 77	1,154 60	1,025 64	1,290 02	752 02	618 19	412 59		
	\$1,774 37	\$1,882 55	\$2,364 87	\$2,515 87	\$2,527 17	\$2,567 87	\$2,280 26	\$2,269 95	\$1,082 80		

EXPENDITURES FOR BRANCHES AND DELIVERY STATIONS. — *Continued.*

	1886-87.	1887-88.	1888-89.	1889-90.	1890-91.	1891-92. (9 mos.)	1892-93.	1893-94.	1894-95.	1895-96.	1896-97.	1897-98.
LOWER MILLS.												
Salaries.....	\$410 00	\$415 11	\$372 00	\$343 00	\$274 00	\$210 00	\$312 00	\$288 00	\$312 00	\$356 00	\$453 67	\$448 00
Books and Periodicals.....	54 05	64 00	64 85	53 72	52 71	58 57	56 21	71 81	53 65	214 36	75 55	65 59
Expense.....	224 25	329 74	330 17	307 32	305 25	263 20	254 46	572 74	460 25	318 38	395 22	256 28
	\$688 30	\$808 85	\$767 02	\$704 04	\$631 96	\$531 77	\$622 67	\$932 55	\$825 90	\$808 74	\$924 44	\$769 87
MATTAPAN.												
Salaries.....	\$125 00	\$139 61	\$130 00	\$120 00	\$25 00	.....	.....	.....	.....	\$305 86	\$424 17	\$448 00
Books and Periodicals.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	204 95	77 25
Expense.....	189 38	160 11	180 08	170 59	276 31	\$226 07	\$341 32	\$364 40	\$359 41	426 64	356 98	355 13
	\$314 38	\$299 72	\$310 08	\$290 59	\$301 31	\$226 07	\$341 32	\$364 40	\$359 41	\$732 50	\$1,046 10	\$880 38
NEPONSET.												
Salaries.....	\$125 00	\$139 61	\$130 00	\$120 00	\$100 00	\$87 56	\$120 00	\$97 50	.....	.....	.....	.....
Expense.....	240 37	206 89	243 47	248 65	234 80	124 45	268 15	184 05	\$353 35	\$320 34	\$390 81	\$372 86
	\$365 37	\$346 50	\$373 47	\$368 65	\$334 80	\$212 01	\$388 15	\$281 55	\$333 35	\$320 34	\$390 81	\$372 86
ROSLINDALE.												
Salaries.....	\$83 28	\$96 19	\$91 00	\$84 00	\$45 46	.....	.....	.....	.....	.....	.....	.....
Expense.....	138 50	154 40	148 45	141 40	288 27	\$267 04	\$339 32	\$371 80	\$459 83	\$438 18	\$604 97	\$774 17
	\$221 78	\$250 59	\$239 45	\$225 40	\$333 73	\$267 04	\$339 32	\$371 80	\$459 83	\$438 18	\$604 97	\$774 17
WEST ROXBURY.												
Salaries.....	\$129 36	\$146 38	\$131 11	\$124 63	\$120 62	\$78 50	\$140 80	\$326 50	\$338 97	\$377 00	\$508 40	\$762 45
Books and Periodicals.....	.....	.....	.....	.....	.....	.....	.....	35 00	17 60	454 20	1,252 19	257 94

Expense	86 71	447 95	92 05	89 05	75 60	84 25	206 37	323 62	264 58	359 69	431 56	470 31
MOUNT BOWDOIN.												
Salaries	\$216 07	\$594 33	\$223 16	\$213 68	\$196 22	\$162 75	\$347 17	\$685 12	\$621 15	\$1,190 89	\$2,282 15	\$1,490 70
Periodicals	\$104 15	\$287 61	\$298 22	\$508 00	\$276 00	\$201 25	\$298 25	\$276 00	\$204 00	\$322 00	\$453 38	\$448 00
Expense	34 65	43 90	132 31	123 79	108 12	78 07	80 57	87 98	68 20	255 31	87 15	73 45
		136 12	448 14	511 21	480 95	346 70	462 29	479 00	423 79	427 36	514 78	524 14
	\$138 80	\$467 63	\$878 67	\$1,233 00	\$865 07	\$626 02	\$841 11	\$842 98	\$785 99	\$1,004 67	\$1,055 31	\$1,045 59
ALLSTON.												
Salaries				\$235 30	\$48 00		\$380 60	\$395 90	\$381 21	\$403 03	\$466 56	\$510 47
Expense				114 16	286 46	\$276 30	\$380 60	\$395 90	\$381 21	\$403 03	\$466 56	\$510 47
ASHMONT.												
Expense				\$349 46	\$334 46	\$276 30	\$245 71	\$379 16	\$371 48	\$359 00	\$386 88	\$363 91
DORCHESTER STATION.												
Expense					\$220 44	\$103 47	\$255 00	\$322 39	\$328 16	\$319 41	\$438 74	\$537 91
BIRD STREET.												
Expense					\$100 33	\$204 34	\$299 14	\$317 47	\$329 98	\$319 52	\$368 47	\$375 24
BLUE HILL AVENUE.												
Expense							\$202 28	\$361 09	\$332 07	\$336 25	\$620 88	\$552 24
HARVARD STREET.												
Expense							\$68 63	\$46 40	\$329 48			
CRESCENT AVENUE.												
Expense							\$53 58	\$326 85	\$329 48	\$463 80	\$393 15	\$476 03

EXPENDITURES FOR BRANCHES AND DELIVERY STATIONS.—*Continued.**Summary.*

	1886-87.	1887-88.	1888-89.	1889-90.	1890-91.	1891-92. (9 mos.)	1892-93.	1893-94.	1894-95.	1895-96.	1896-97.	1897-98.
East Boston...	\$4,207 89	\$4,255 22	\$3,960 61	\$3,470 39	\$3,899 28	\$2,900 74	\$3,859 33	\$3,582 19	\$3,816 31	\$4,266 27	\$4,521 83	4,325 13
South Boston.	4,893 01	4,798 40	7,690 51	6,447 37	6,525 63	6,117 00	7,227 14	6,897 67	7,185 56	7,772 96	9,122 41	7,678 27
Roxbury	4,754 48	5,627 30	7,129 29	6,228 42	6,332 90	5,419 53	6,466 76	6,476 15	6,283 56	6,820 12	7,458 71	6,883 85
Charlestown ..	4,370 81	4,491 23	4,251 08	4,079 05	4,212 16	3,198 28	4,272 87	3,693 25	3,806 57	4,147 06	5,300 39	4,846 57
Brighton	2,612 54	2,800 97	2,724 79	2,734 63	2,862 11	2,460 70	2,709 70	2,862 80	2,711 34	3,231 89	4,322 53	3,714 93
Dorchester....	3,962 44	4,179 48	4,100 66	3,737 20	3,438 21	2,571 17	3,058 10	2,882 77	3,019 46	3,717 44	4,689 60	4,029 21
South End	4,187 08	3,364 71	3,702 23	3,639 38	3,111 08	2,969 63	3,619 11	3,536 32	3,279 20	3,351 84	4,003 50	3,780 83
Jamaica Plain	3,820 80	4,180 57	3,344 74	3,084 89	2,887 35	2,633 88	3,437 91	2,964 79	3,132 63	3,449 35	4,110 48	3,736 52
North End	1,774 37	1,882 55	2,364 87	2,515 87	2,527 17	2,567 87	2,125 75	2,289 26	2,269 95	{ 1,082 80 (6 mos.)		
Lower Mills...	688 30	808 85	767 02	704 04	631 96	531 77	622 67	192 55	825 90	868 74	924 44	769 87
Mattapan	314 38	259 72	310 08	290 59	301 31	226 07	341 32	364 40	359 41	732 50	1,046 10	880 38
Neponset.....	365 37	346 50	373 47	368 65	334 80	212 01	388 15	281 55	353 35	320 34	390 81	372 86
Roslindale	221 78	250 59	239 45	225 40	333 73	267 04	339 32	371 80	459 83	438 18	604 97	774 17
West Roxbury	216 07	594 33	223 16	213 63	196 22	162 75	347 17	685 12	621 15	1,190 89	2,282 15	1,490 70
Mt. Bowdoin..	138 80	467 63	878 67	1,233 00	865 07	626 62	841 11	842 98	785 99	1,004 67	1,055 31	1,045 59
Allston.....	.....	.....	.....	349 46	334 46	276 30	380 60	305 90	381 21	403 03	466 56	510 47
Ashmont.....	.....	.....	.....	.....	220 44	193 47	245 71	379 16	371 48	359 00	386 88	363 91
Dorch. Station	.....	.....	.....	.....	100 33	204 34	255 60	322 39	328 16	319 41	438 74	587 91
Bird Street....	.....	.....	.....	.....	.....	.....	299 14	317 47	329 98	319 52	368 47	375 24

Blue Hill Ave.,	.....	.....	.....	.....	.....	202 28	361 09	332 07	336 25	620 88	552 24
Harvard St.,	.....	.....	.....	.....	.....	68 63	46 40	329 48			
Greene Ave.,	.....	.....	.....	.....	.....	53 58	326 85	329 48	463 80	393 15	476 08
No. Brighton..	.....	.....	.....	.....	.....		113 51	1,043 35	1,074 95	1,028 91	1,108 37
West End.....	.....	.....	.....	.....	.....	17 60	.....	.....	{ 934 62 { (4 mos.)	7,358 68	7,553 08
Upham's Cor.,	.....	.....	.....	.....	.....	.....	.....	.....	.....	{ 401 06 { (9 mos.)	673 09
Broadway Ex.,	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,348 36	2,262 91
Warren St.,	.....	.....	.....	.....	.....	.....	.....	.....	.....	{ 379 32 { (8 mos.)	677 18
Rox. Crossing,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	166 34
Boylston Sta.,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	{ (11 mos.)
School-Houses,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	88 30
Eng. Houses..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	{ (3 mos.)
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	47 52
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	71 41
Total	\$36,528 72	\$38,348 05	\$42,070 23	\$39,322 02	\$39,214 21	\$41,179 55	\$40,926 37	\$42,355 51	\$46,605 63	\$63,084 24	\$59,292 93

LIBRARY TRUST FUNDS.

BIGELOW FUND. — This is a donation made by the late JOHN P. BIGELOW, in August, 1850, when Mayor of the city.

The income from this fund is to be appropriated to the purchase of books for the increase of the library.

Invested in one City of Boston Four per cent. Bond, for . . . \$1,000 00

Payable to the Chairman of the Committee on the Public Library for the time being.

BATES FUND. — This is a donation made by the late JOSHUA BATES of London, in March, 1853.

Invested in one City of Boston Four per cent. Bond, for \$50,000 00

“The income only of this fund is to be, each and every year, expended in the purchase of such books of permanent value and authority as may be found most needful and most useful.” Payable to the Mayor of the city for the time being.

BOWDITCH FUND. — This is the bequest of J. INGERSOLL BOWDITCH.

Invested in one City of Boston Three and one-half per cent. Bond \$10,000 00

The whole income in each and every year to be expended in the purchase of books of permanent value and authority in mathematics and astronomy.

PHILLIPS FUND. — This is a donation made by the late JONATHAN PHILLIPS of Boston, April, 1853.

Invested in one City of Boston Four per cent. Bond, for . . . \$10,000 00

The interest on this fund is to be used exclusively for the purchase of books for said library.*

Also a bequest by the same gentleman in his will, dated September 20, 1849.

Invested in one City of Boston Six per cent. Bond, for . . . \$20,000 00

The interest on which is to be annually devoted to the maintenance of a free Public Library.

Both of these items are payable to the Mayor of the city for the time being.

ABBOTT LAWRENCE FUND. — This is the bequest of the late ABBOTT LAWRENCE of Boston.

Invested in one City of Boston Six per cent. Bond, for . . . \$10,000 00

The interest on this fund is to be exclusively appropriated for the purchase of books for the said library, having a permanent value.

EDWARD LAWRENCE FUND. — This is the bequest of the late EDWARD LAWRENCE of Charlestown. The following clause from his will explains its purpose:

“To hold and apply the income, and so much of the principal as they may choose, to the purchase of special books of reference to be kept and used only at the Charlestown Branch of said Public Library.”

Invested in one City of Boston Four per cent. Bond, for . . . \$500 00

PIERCE FUND.—This is a donation made by HENRY L. PIERCE, Mayor of the city, November 29, 1873, and accepted by the City Council, December 27, 1873.

Invested in one City of Boston Four per cent. Bond, for . \$5,000 00

TOWNSEND FUND.—This is a donation from William Minot and William Minot, Jr., executors of the will of MARY P. TOWNSEND, of Boston, at whose disposal she left a certain portion of her estate in trust, for such charitable and public institutions as they may think meritorious. Said executors accordingly selected the Public Library of the City of Boston as one of such institutions, and attached the following conditions to the legacy: "The income only shall, in each and every year, be expended in the purchase of books for the use of the library; each of which books shall have been published in some one edition at least five years at the time it may be so purchased."

Invested in one City of Boston Five per cent. Bond, for . \$4,000 00

TICKNOR BEQUEST.—By the will of the late GEORGE TICKNOR, of Boston, he gave to the City of Boston, on the death of his wife, all his books and manuscripts in the Spanish and Portuguese languages, about four thousand volumes, and also the sum of four thousand dollars. After the receipt of said sum, the city is required to spend not less than one thousand dollars in every five years during the twenty-five years next succeeding (*i.e.*, the income of four thousand dollars, at the rate of five per cent. per annum), in the purchase of books in the Spanish and Portuguese languages and literature. At the end of twenty-five years, the income of the said sum is to be expended annually in the purchase of books of permanent value, either in the Spanish or Portuguese language, or in such other languages as may be deemed expedient by those having charge of the Library. These books, bequeathed or purchased, are always to be freely accessible for reference or study, but are not to be loaned for use outside of the library building. If these bequests are not accepted by the city, and the trust and conditions faithfully executed, the books, manuscripts and money are to be given to the President and Fellows of Harvard College.

In order that the city might receive the immediate benefit of this contribution, Anna Ticknor, widow of the donor, relinquished her right to retain during her life the books and manuscripts, and placed them under the control of the city, the City Council having previously accepted the bequests, in accordance with the terms and conditions of said will, and the Trustees of the Public Library received said bequests on behalf of the city, and made suitable arrangements for the care and custody of the books and manuscripts.

Invested in one City of Boston Four per cent. Bond, for . \$4,000 00

FRANKLIN CLUB FUND.—This is a donation made in June, 1863, by a literary association of young men in Boston, who, at the dissolution of the association, authorized its trustees, Thomas Minns, John J. French and J. Franklin Reed, to dispose of the funds on hand in such a manner as to them should seem judicious. They elected to bestow it on the Public Library, attaching to it the following conditions: "In trust that the income, but the income only, shall, year by year, be expended in the purchase of books of permanent value for the use of the free Public Library of the city, and as far as practicable, of such a character as to be of special interest to young men." The Trustees expressed a preference for books relative to Government and Political Economy.

Invested in one City of Boston Four per cent. Bond, for . \$1,000 00

TREADWELL FUND.—By the will of the late DANIEL TREADWELL, of Cambridge, late Rumford Professor in Harvard College, who died February 27, 1872, he left the residue of his estate, after payment of debts, legacies, etc., in trust to his executors, to hold during the life of his wife for her benefit, and after her decease to divide the residue then remaining in the hands of the trustees as therein provided, and convey one-fifth part thereof to the Trustees of the Public Library in the City of Boston.

The City Council accepted said bequest, and authorized the Trustees of the Public Library to receive the same, and to invest it in the City of Boston Bonds, the income of which is to be expended by said trustees, in such manner as they may deem for the best interests of the Library.

Invested in the City of Boston Four per cent. Bonds, for	\$5,550 00
Invested in the City of Boston Three and one-half per cent. Bonds, for	1,400 00
Invested in 16 shares B. & A. R.R. Co. stock, par value \$100 each	1,600 00
Invested in 6 shares B. & P. R.R. Co. stock, par value \$100 each	600 00
Invested in 12 shares Fitchburg R.R. Co. stock, par value \$100 each	1,200 00
Invested in 1 share Vt. & Mass. R.R. Co. stock, par value \$100 each	100 00
	\$10,450 00

CHARLOTTE HARRIS FUND. — Bequest of CHARLOTTE HARRIS, late of Boston, the object of which is stated in the following extract from her will:

"I give to the Charlestown Public Library \$10,000, to be invested on interest, which interest is to be applied to the purchase of books published before 1850. I also give to said Public Library my own private library, and the portrait of my grandfather, Richard Devens." Bequest accepted by City Council, July 31, 1877.

Invested in one City of Boston Four per cent. Bond, for . \$10,000 00

THOMAS B. HARRIS FUND.—Bequest of THOMAS B. HARRIS, late of Charlestown, for the benefit of the Charlestown Public Library.

Invested in one City of Boston Four per cent. Bond, for	\$1,000 00
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SCHOLFIELD FUND. — Bequest of the late ARTHUR SCHOLFIELD, who died in New York, January 17, 1883. The interest to be paid to certain heirs during their lives, and then to be used for the purchase of books of permanent value. The last heir, Joseph Scholfield, died November 18, 1889, and by his will bequeathed to the City of Boston the sum of \$11,800, which represents the income of said fund, received by him up to the time of his death, to be added to the fund given by his brother.

Invested in one City of Boston Four per cent. Bond, for	\$50,000 00
“ “ “ “ “	11,800 00
	<u>\$61,800 00</u>

GREEN FUND. -- Donations of Dr. SAMUEL A. GREEN, of \$2,000, the income of which is to be expended for the purchase of books relating to American history.

Invested in two City of Boston Five per cent. Bonds, for	\$1,500 00
Invested in one City of Boston Four per cent. Bond, for	500 00
	<u>\$2,000 00</u>

SOUTH BOSTON BRANCH LIBRARY TRUST FUND.—Donation of a citizen of South Boston, the income of which is to be expended for the benefit of the South Boston Branch Library.

Invested in City of Boston Four per cent. Bond, for . . . \$100 00

CHARLES GREELY LORING MEMORIAL FUND.—This is a donation from the family of Charles Greely Loring, the income of which is to be expended for the purchase of books for the West End Branch.

Invested in one City of Boston Four per cent. Bond, for . . . \$500 00

CHARLES MEAD PUBLIC LIBRARY TRUST FUND.—Received from Charles Mead, executor of the estate of Charles Mead, the amount of legacy of the late Charles Mead, to constitute the "CHARLES MEAD PUBLIC LIBRARY TRUST FUND," for the promotion of the objects of the Public Library, in such manner as the government of said library shall deem best, and so far as the government shall deem consistent with the objects of the library, to be used for the benefit of the South Boston Branch Library.

Invested in one City of Boston Four per cent. Bond, for . . . \$2,500 00

ARTZ FUND.—This is a donation made in November, 1896, by Miss VICTORINE THOMAS ARTZ of Chicago, the income "to be employed in the purchase of valuable, rare editions of the writings, either in verse or prose, of American and of foreign authors." These books are to be known as the "Longfellow Memorial Collection."

Invested in one City of Boston Four per cent. Bond, for . . . \$10,000 00

JOHN BOYLE O'REILLY MEMORIAL FUND.—Received from the members of the Papyrus Club, May, 1897. The income thereof is to be expended for the purchase of books in memory of their late member, JOHN BOYLE O'REILLY.

Invested in one City of Boston Four per cent. Bond, for . . . \$1,000 00

TWENTIETH REGIMENT MEMORIAL FUND.—This is a donation made in April, 1897, by the Association of Officers of the Twentieth Massachusetts Volunteer Infantry. It is to be used for the purchase of books of a military and patriotic character, to be placed in the alcove appropriated as a memorial of the Twentieth Regiment.

Invested in one City of Boston Four per cent. Bond, for . . . \$5,000 00

TODD FUND.—This is a gift made in October, 1897, by Wm. C. TODD of New Hampshire. The income is to be expended annually in payment for such current newspapers of this and other countries as the board of officers for the time being having charge of the Public Library of the City of Boston, shall purchase.

Invested in one City of Boston Four per cent. Bond, for . . . \$50,000 00

Bequest of Rev. Dr. CALEB D. BRADLEE.

Cash in Treasury \$1,000 00

RECAPITULATION OF PUBLIC LIBRARY TRUST FUNDS.

Scholfield Fund	\$61,800 00
Bates Fund	50,000 00
Todd Fund	50,000 00
Phillips Fund	20,000 00
Phillips Fund	10,000 00
Bowditch Fund	10,000 00
Charlotte Harris Fund	10,000 00
Abbott Lawrence Fund	10,000 00
Treadwell Fund	10,487 69
Artz Fund	10,000 00
Twentieth Regiment Memorial Fund	5,000 00
Pierce Fund	5,000 00
Townsend Fund	4,000 00
Ticknor Fund	4,000 00
Charles Mead Fund	2,500 00
Green Fund	2,000 00
Bigelow Fund	1,000 00
Thomas B. Harris Fund	1,000 00
Franklin Club Fund	1,000 00
John Boyle O'Reilly Memorial Fund	1,000 00
Bradlee Fund	1,000 00
Edward Lawrence Fund	500 00
Charles Greely Loring Memorial Fund	500 00
South Boston Branch Library Trust Fund	100 00

\$270,887 69

LIBRARY TRUST FUNDS.—INVESTED IN CITY OF BOSTON BONDS.

GIVER.	Amount.	When received.	No. of Bond.	When due.	Income.	Provisions.
1 Joshua Bates.....	\$50,000 00	March, 1853	8,104	April, 1913	\$2,900	To buy "books of permanent value."
2 Jonathan Phillips.....	20,000 00	April, 1861	322	Jan'y, 1906	1,600	"To the maintenance of a free public library."
	10,000 00	April, 1853	8,105	April, 1913		"Purchase of books."
3 Abbott Lawrence.....	10,000 00	May, 1860	281	July, 1905	600	Books having a permanent value.
4 Charlotte Harris.....	10,000 00	August, 1877	2,879	Oct., 1917	400	Books for Charlestown branch, published before 1850.
5 Henry L. Pierce.....	5,000 00	December, 1873	7,992	Jan'y, 1924	200	"Books of permanent value for the Bates Hall."
6 Mary P. Townsend.....	4,000 00	April, 1879	2,960	April, 1899	200	Books five years old in some one edition.
7 George Ticknor.....	4,000 00	April, 1879	2,968	Oct., 1920	160	Books in Spanish and Portuguese five years old in some one edition.
8 John P. Bigelow.....	1,000 00	August, 1850	8,106	April, 1913	40	Purchase of books.
9 Franklin Club.....	1,000 00	June, 1863	1,224	Jan'y, 1914	40	Books of permanent value, preferably "books on government and political economy."
10 Samuel A. Green.....	1,500 00	November, 1878	3,714	Oct., 1900	75	Books relating to American history.
	500 00	April, 1884	722	April, 1908		
11 South Boston.....	100 00	September, 1870	1,243	April, 1914	20	
12 Arthur Schofield.....	50,000 00	December, 1883	5,596	July, 1919	4	For benefit of South Boston Branch.
13 Joseph Schofield.....	11,800 00	July, 1890	1,223	Oct., 1913	2,060	To be used for books of permanent value.
14 Thomas B. Harris.....	1,000 00	April, 1884	6,300	July, 1920	472	
	1,000 00	April, 1884	1,244	April, 1914	40	For benefit of Charlestown branch.
15 Daniel Treadwell.....	2,000 00	October, 1885	1,382	April, 1916	271	To be expended by the Trustees in such manner as they may deem for the best interest of the Library.
	1,700 00		1,486	Oct., 1917		
	1,400 00	November, 1889	1,486	Oct., 1917		
	1,000 00	July, 1892	1,754	Nov., 1919		
	350 00	1894	2,210	Oct., 1921		
	500 00	January, 1896	2,452	Oct., 1923		
16 Edward Lawrence.....	500 00	May, 1886	9,381	Jan'y, 1916		
17 J. Ingersoll Bowditch.....	10,000 00	January, 1890	1,383	April, 1916	20	"To hold and apply the income and so much of the principal as they [the Trustees] may choose to the purchase of special books of reference to be kept and used only at the Charlestown Branch of said Public Library."
18 { Family of Charles Greely Loring }	500 00	January, 1896	1,816	Jan'y, 1920	350	For "the purchase of books of permanent value and authority in mathematics and astronomy," to be added to the Bowditch collection.
19 Charles Mead.....	2,500 00	October, 1896	9,479	Jan'y, 1916	20	Memorial Fund from the income of which books are to be bought for the West End Branch.
20 Victorine T. Artz.....	10,000 00	November, 1896	10,304	Jan'y, 1917	100	"For the promotion of the objects of the Public Library in such manner as the government of said library shall deem best, and so far as the government shall deem consistent with the objects of the library, to be used for the benefit of the South Boston Branch Library."
21 Papyrus Club.....	1,000 00	May, 1897	10,305	Jan'y, 1917	400	For the purchase of valuable and rare editions of the writings, either in prose or verse, of American and of foreign authors, "to be known as the Longfellow Memorial Collection."
22 Twentieth Regiment Ass'n.....	5,000 00	April, 1897	10,531	July, 1917	40	John Boyle O'Reilly Memorial Fund "for the purchase of books."
23 Wm. C. Todd.....	50,000 00	October, 1897	10,785	Oct., 1917	200	"For the purchase of books of a military and patriotic character, to be placed in the alcove appropriated as a Memorial of the Twentieth Regiment."
			10,890	Oct., 1927	2,900	The income to be expended annually for current newspapers, foreign and domestic.
	\$266,350 00				\$11,252	

MEMORANDA.

- (1) Joshua Bates, born near Boston, 1788, died in London, as the head of the house of Baring Brothers & Co., 1854. In addition to this fund, he gave \$50,000 worth of books to the Library.
- (2) The sum of \$20,000 was a gift in Mr. Phillips' lifetime. The other \$30,000 was bequeathed by his will, dated 25th of September, 1861. He died 29th July, 1860, aged 82.
- (3) Mr. Lawrence died in August, 1856, and this sum was a bequest.
- (4) The bequest of Charlotte Harris to the Charlestown branch. With it her private library was also given.
- (5) The donation of Mayor Pierce, previous to his retirement from office. The principal or interest may be expended as is deemed best.
- (6) This fund was received from William Minot and William Minot, Jr., executors of Miss Townsend's will, to whom discretionary power in making the gift was given by the will.
- (7) This bequest accompanied the testamentary gift of his Spanish and Portuguese library. It required that \$1,000, at least, shall be spent every five years for twenty-five years for the addition of books to said library.
- (8) This fund was a sum intended for a testimonial to Mr. Bigelow on retiring from the majority, and was transferred by him to this purpose.
- (9) Given by the Trustees of the Franklin Club, under the authority given them at the dissolution of that literary association.
- (10) Given by the family of the late Charles Greely Loring as a memorial fund from the income of which books are to be bought for the West End Branch.
- (11) Legacy of the late Charles Mead, to constitute the "Charles Mead Public Library Trust Fund."
- (12) Given by Victorine Thomas Artz, to constitute the "Longfellow Memorial Collection."
- (13) The donation of the Papyrus Club, in memory of John Boyle O'Reilly.
- (14) Given by the Twentieth Regiment Association, as a memorial of the Twentieth Regiment, Massachusetts Volunteer Infantry.
- (15) The gift of William C. Todd, to provide "free access to representative newspapers of the world."

STOCKS AND CASH OTHER THAN CITY BONDS HELD BY TREADWELL FUND, PUBLIC LIBRARY.

SHARES.	Par value per Share.	Value per Share as received from Trustee.	Total as received from Trustee.	Income.	Remarks.
15 B. & A. R.R. Co.....	\$100 00	\$179 00	\$2,685 00	1 \$128 00	
6 B. & Prov. R.R. Co.	100 00	179 50	1,077 00		
9 Fitchburg R.R. Co.....	100 00	118 00	1,062 00	\$5,585 00	48 00
1 Vt. & Mass. R.R. Co.....	100 00	133 00	133 00	6 00	April 5, 1887. The certificates of 9 shares of F. R.R. exchanged for a certificate of 12 shares preferred stock in same corporation, par value \$100. Total, \$1,200.
Cash.....			88 00	Less 88 00	Less paid May 10, 1886, to City Collector, per order of Board of Trustees of Public Library.
				\$5,497 00	
1 B. & A. R.R. Co.....	100 00			100 00	
Cash in City Treasury.....				37 69	

1 Includes income on the one share below.

APPENDIX II.

EXTENT OF THE LIBRARY BY YEARS.

YEARS.	Total volumes in the Libraries.	YEARS.	Total volumes in the Libraries.	YEARS.	Total volumes in the Libraries.
1 1852-53	9,688	16 1867-68	144,092	31 1882-83	422,116
2 1853-54	16,221	17 1868-69	152,796	32 1883-84	438,594
3 1854-55	22,617	18 1869-70	160,573	33 1884-85	453,947
4 1855-56	28,080	19 1870-71	179,250	34 1885	460,993
5 1856-57	34,896	20 1871-72	192,958	35 1886	479,421
6 1857-58	70,851	21 1872-73	209,456	36 1887	492,956
7 1858-59	78,043	22 1873-74	260,550	37 1888	505,872
8 1859-60	85,031	23 1874-75	276,918	38 1889	520,508
9 1860-61	97,386	24 1875-76	297,873	39 1890	536,027
10 1861-62	105,034	25 1876-77	312,010	40 1891	556,283
11 1862-63	110,563	26 1877-78	345,734	41 1892	576,237
12 1863-64	116,934	27 1878-79	360,963	42 1893	597,152
13 1864-65	123,016	28 1879-80	377,225	43 1894	610,375
14 1865-66	130,678	29 1880-81	390,982	44 1895	628,297
15 1866-67	136,080	30 1881-82	404,221	45 1896-97	663,768
				46 1897-98	698,888

VOLUMES IN LIBRARY AND BRANCHES, JANUARY 31, 1898,
ACCORDING TO LOCATION.

Roxbury branch	Central Library	515,007	Brighton	17,076
	Duplicate room	13,072	Charlestown	29,861
		528,079	Dorchester	16,815
			East Boston	13,292
			Jamaica Plain	13,782
			South Boston	14,799
			South End	14,592
			West End	10,359
			West Roxbury	4,153
			Lower Mills (Station A)	88
			Mattapan (Station D)	98
	Fellowes Athenæum	18,525	Mt. Bowdoin (Station F)	976
	Collection owned by City	15,026	North Brighton (Station L)	75
	Total, Roxbury branch	33,551	Broadway Ext. (Station P)	1,292

APPENDIX III.

NET INCREASE OF THE SEVERAL DEPARTMENTS.

	1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896-97.	1897-98.
Bates Hall.....	9,733	11,857	13,518	15,306	16,499	20,493	32,491	} 11,821	20,273	26,579
Lower Hall.....	874	710	1's 50	1's 23	818	loss 455	746			
Duplicate room	1's 52	330	419	2,355	1's 9,143	loss 542	1's 8,056	313	2,890	8,603
Brighton branch	46	130	91	167	98	23	292	107	1,217	276
Charlestown branch..	145	1's 70	233	421	22	339	300	loss 16	1's 112	398
Dorchester branch ...	423	309	269	222	209	134	358	loss 73	1,415	159
East Boston branch..	170	63	58	59	5	48	126	112	1,021	147
Jamaica Plain branch	335	294	150	214	112	221	329	273	1,277	374
¹ North End branch ..	8	4	12	224	84	75	63	1's 1,861		
Roxbury branch	280	199	146	308	loss 352	147	382	48	1,202	1's 2,896
Fellowes Athenæum,	390	397	361	438	289	318	318	407	348	402
South Boston branch,	284	159	115	200	51	55	401	loss 289	1,509	loss 69
South End branch....	260	248	187	365	loss 67	26	276	138	1,435	308
West End branch							1,897	6,522	1,555	385
W. Roxbury branch..	20	6	10	.....	.....	33	4	626	loss 8	185
Lower Mills Reading room								85	3	
Mattapan Reading room								73	24	1
Mt. Bowdoin Reading room								74	932	loss 30
North Brighton Read- ing room					8			74	loss 7	
Broadway Extension Reading room.....								261	724	307
Total	12,916	14,636	15,519	20,256	8,633	20,915	29,927	18,695	35,698	35,129

¹ Collection transferred to West End branch.

APPENDIX III. — *Continued.*

LOCATED FEBRUARY 1, 1897, TO JANUARY 31, 1898.

	Located.	Condemned, missing, transferred.	Net gain.
Central Library.....	29,185	2,606	26,579
Central Library, Duplicate room.....	8,603	.....	8,603
Brighton branch.....	619	1343	276
Charlestown branch.....	565	167	398
Dorchester branch.....	651	492	159
East Boston branch	644	497	147
Jamaica Plain branch.....	655	281	374
Roxbury branch, city collection	546	3,442	loss 2,896
Fellowes Athenæum.....	459	57	402
South Boston branch.....	823	892	loss 69
South End branch	564	256	308
West End branch.....	532	147	385
West Roxbury branch.....	276	291	185
Lower Mills Reading room .....	.....	.....	.....
Mattapan Reading room.....	1	.....	1
Mt. Bowdoin Reading room.....	.....	30	loss 30
North Brighton Reading room.....	.....	.....	.....
Broadway Extension Reading room.....	437	130	307
	44,560	9,431	35,129

¹ Includes error of 68 in count last year.² Includes error of 26 in count last year.

VOLUMES IN THE SPECIAL COLLECTIONS.

	1882.	1887.	1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896-97.	1897-98.
Patent library..... ¹	3,142	3,796	3,965	4,097	4,218	4,369	4,335	4,551	5,531	5,733	5,971	6,287
Bowditch library.....	3,224	4,706	4,935	5,225	5,348	5,509	5,626	5,717	6,003	6,077	6,192	6,279
Parker library.....	12,363	14,077	14,104	14,112	14,114	14,116	14,116	14,116	13,819	13,820	13,845	13,848
Prince library.....	2,274	2,775	2,824	2,905	2,835	2,953	3,000	3,025	3,2045	2,045	2,045	2,045
Tieknor library.....	5,463	5,790	5,877	5,923	5,966	5,981	6,016	6,006	6,086	6,149	6,165	6,172
Barton library.....	13,487	13,841	13,755	13,724	13,735	13,740	13,764	13,775	13,624	13,627	213,401	13,491
Franklin library.....	240	403	416	427	446	465	482	499	565	578	582	591
Thayer library.....	893	1,280	1,368	1,427	1,500	1,500	3,984	5,269	5,383	5,384	5,385	5,385
John A. Lewis library.....						596	617	621	679	679	679	679
Gilbert library.....								420	422	422	422	422
Tooti library (1869, 129 vols.).....									129	129	129	129
Hunt library (1877, 669 vols.).....									669	669	669	669
John Adams library.....									2,819	2,819	2,819	2,819
Allen A. Brown library.....									6,382	6,990	7,471	7,745
Chamberlain library.....									150	150	150	150
Military library.....									398	315	321	595
U. S. Congressional docs.....										3,629	3,763	3,884
Gr. Br. Parl. papers.....										6,476	6,584	6,696

¹ Actual enumeration of original Prince library. Account is now made elsewhere of additions purchased by the city for this collection.
² There has been no loss in the Barton library, but a correction of an error of 138 previously made.

APPENDIX IV.

CENTRAL LIBRARY CLASSIFICATIONS.

CLASS NO.	CLASSES.	GENERAL COLLECTION.				SPECIAL LIBRARIES.																		Total, including special libraries.		
		Placed on shelves, found, etc. 1897.	Condemned, lost, missing and transferred.	Total in General library, Jan. 31, 1898.	Bowditch library.	Parker library.	Prince library.	Testi library.	Ticknor library.	Barton library.	Thayer library.	Hunt library.	Franklin library.	Gilbert library.	Patent library.	John A. Adams library.	Military library.	John Adams library.	Allen A. Brown library.	Chamberlain library.	Galatea library.	Colman library.	Ariz library.		Newspaper room.	Duplicate Unclassified.
I.	Cyclopaedias, etc.	14	1	1,793	249	322	6			21	15														2,406	
II.	Bibliography and literary history	574	13	12,574	35	615	5		278	690	31		10		8						12				14,238	
III.	General history, biography, travel, and geography	615	14	13,825	17	647	43		54	135	424		1		9						99				15,247	
IV.	American history, geography, biography, travel and polite literature	3,483	61	65,401	107	1,091	833		362	812	385	669	469	75	866	679	595				218		407		72,969	
V.	English history, etc.	1,665	38	44,490	77	858	114		21	3,204	2,459		18	270	4,429						197	31	2		56,170	
VI.	French history, etc.	738	25	23,287	60	522	7		58	2,474	670		8	4	415						98	1			27,604	
VII.	Italian history, etc.	282	8	10,960	11	326	2		31	337	184			1						9					11,861	
VIII.	German history, etc.	913	49	16,717	9	1,423	8		26	254	191		1	2	432						32		1		19,096	
IX.	Greek, Latin, and philology	344	7	9,604	9	1,181	197		132	617	23		3	1	1						8		1		11,867	
X.	Spanish and Portuguese history and literature	124	4	2,960	22	95			4,172	200	64			1	1										7,515	
XI.	Oriental history, geography, biography, travel and literature	910	16	13,763	2	329	1		4	225	61				28						15				14,428	
XIIa.	Periodicals	707	44	22,335	1,387	732	5		250	471	53			14									4,436		29,683	
XIIb.	Transactions	118	2	7,023	58																				7,081	
XIII.	Theology, ecclesiastical history, etc.	1,261	16	33,000	147	3,518	683		381	245	248		12								1				38,235	
XIV.	Metaphysics and social science	1,269	31	19,772	6	1,360	52		121	130	66		29	2							274				21,812	
XV.	Jurisprudence	176	4	7,856	3	307	14		63	28	2				101		2,819				34				11,227	
XVI.	Political economy	367	7	6,881	65	98			24	17	2														7,087	
XVII.	Medical science	619	16	20,696	3	75	23		5	27	5		4								39				20,877	
XVIII.	Natural history and science	1,063	15	14,828	15	170	1		32	89	31											103			15,269	
XIX.	Mathematics and physical science	1,077	35	19,061	3,969	136	25		63	48	2		19	1											23,344	
XX.	Useful arts	647	30	13,370	9	13			36	16	59		5	1	4							305			13,818	
XXI.	Fine arts	873	16	15,274		30	1	129	14	43	400						7,745				30	251			23,917	
XXII.	Bound volumes of miscellaneous pamphlets				13					84	10			50											157	
XXIII.	Bound volumes of manuscripts	21		81	6				45	93			12					150							411	
XXIV.	Shakespeare					1				3,231															3,232	
XXV.	Books for the blind	19		559																					559	
XXVI.	Stack Four	8,351	54	44,877																					44,877	
XXVII.	Duplicate room																							13,072	13,072	
	Totals	26,230	2,606	441,097	6,279	13,848	2,045	129	6,172	13,491	5,385	669	591	422	6,287	679	595	2,819	7,745	150	1,066	691	411	4,436	13,072	528,679

EXPLANATION. — Class III. includes general history, etc., when embracing several countries, and collected works of historians.
 Class IV. includes the collected works of American writers, and what of American literature is sometimes termed "polygraphy."
 Classes V., VI., VII., and VIII. have the same scope for the respective countries that Class IV. has for America.
 Class VIII. includes also Belgium, the Netherlands, Switzerland, and the Scandinavian nations.
 Class XIV. includes political science and ethics, education, etc.
 Class XIX. includes mechanics, military and naval arts, agriculture, domestic arts, etc.

Class XXIV. does not include the Shakespeare collection of the general library.
 Class XXVI. contains the former "Lower Hall" collection, which has a different classification. It includes 26,456 volumes of fiction.

¹ Framed.

NOTE. — The dates given in the special libraries column show the year when these collections were acquired by the Library.

APPENDIX V.

CLASSIFICATION.

BRANCH LIBRARIES, JANUARY 31, 1898, AS REPORTED BY CUSTODIANS OF BRANCHES.

	Brighton.	Charlestown.	Dorchester.	East Boston.	Jamaica Plain.	ROXBURY.		South Boston.	South End.	West End.	West Roxbury.
						Branch.	Fellows Athenæum.				
Reference-books	354	1,690	297	301	283	126	161	377	177	483	280
Genealogy and Heraldry	49	30	2	26	5	16	85	5	3	7	1
Biography	1,079	2,256	1,570	1,118	1,143	1,183	2,425	1,257	1,673	1,205	409
History	1,390	2,916	1,270	1,088	1,231	1,224	2,336	1,222	1,136	853	302
Fine Arts, Archæology.....	32	207	228	93	284	194	492	160	39	185	10
Geography, Travels,	814	1,334	1,122	682	766	698	2,158	919	1,289	659	252
Language.....	15	311	51	90	96	69	164	66	43	105	2
Literature	1,967	4,200	1,964	1,883	1,253	1,384	3,850	1,529	1,358	996	391
Medicine, Hygiene..	5	486	115	79	84	97	374	94	139	62	
Natural science	956	826	335	85	312	295	528	493	609	443	189
Philosophy, Ethics, Education	471	732	178	62	148	144	310	142	320	218	4
Religion, Theology,	908	1,476	334	337	134	426	1,294	302	313	848	153
Sociology	1,202	322	226	162	116	165	668	151	218	207	2
Law.....	10	658	24	14	31	16	123	25	43	5	
Useful and Industrial Arts.....	104	436	192	84	185	238	162	350	202	83	
Amusements, Games, Sports	53	74	88	64	50	86	70	59	113	61	1
Fiction	4,519	3,002	5,299	4,593	4,555	4,441	1,029	4,380	4,256	1,542	854
Books for the young,	1,645	1,712	2,470	2,198	1,743	2,250	43	1,636	2,276	1,890	1,201
Bound periodicals..	1,276	3,252	1,050	333	1,363	1,974	2,253	1,632	385	507	102
Unclassified.....	227										
Harris Collection...	.....	3,941									
	17,076	29,861	16,815	13,292	13,782	15,026	18,525	14,799	14,592	10,359	4,153

APPENDIX VI.

REGISTRATION DEPARTMENT.

Statistical Report, February 1, 1897, to January 31, 1898.

FORMER REGISTRATIONS.

	Date.	No. of Names.
First	1854-1858.....	17,066
Second	1859-1867.....	52,829
Third	1868-April 30, 1886.....	227,581
Fourth	May 1, 1886-March 31, 1894	124,396
Fifth.....	April 1, 1894-December 31, 1894...	25,443

Registrations, including old and new names, lost and filled cards replaced, expired cards renewed during each year, for the five years prior to 1895 :

1890	.	.	.	.	14,175
1891	.	.	.	.	11,502
1892	.	.	.	.	11,707
1893	.	.	.	.	11,029
1894	.	.	.	.	29,971
Average, 15,677.					

LIVE CARDS OUTSTANDING.

DATE.	Number.	Gain.
February 1, 1898.....	64,973	
February 1, 1897.....	45,606	19,367
February 1, 1897.....	45,606	
February 1, 1896.....	34,842	10,764
February 1, 1896.....	34,842	
January 1, 1895.....	29,971	4,871
Total gain.....	.....	35,002

CARDS ISSUED FEBRUARY 1, 1897—JANUARY 31, 1898.																					
Live Cards Feb. 1, 1897.	RE-REGISTRATIONS.				NEW REGISTRATIONS.				RENEWALS.				Total Number Cards Out.	Expired (issued in Jan., 1898).	Live Cards Jan. 31, 1898.	Gain for Year.	* No. of persons who have al- tered privilege to lapse.	Lost Cards replaced.		Filled Cards re- placed, etc.	
	Males.		Females.		Males.		Females.		Males.		Females.										
	Over 21.	Under 21.	Over 21.	Under 21.	Over 21.	Under 21.	Over 21.	Under 21.	Over 21.	Under 21.	Over 21.	Under 21.									
	Paid for.	After delay.																			
Central Library	20,837	573	15	613	14	2,637	894	2,924	777	805	95	991	99	31,274	2,380	23,894	8,057	7,839	547	864	6,918
Brighton Branch	912	22	3	33	3	47	66	75	117	17	15	23	18	1,351	95	1,256	344	523	12	74	381
Charlestown Branch	2,158	31	4	42	4	124	266	141	210	58	40	73	46	3,197	369	2,828	670	1,152	25	99	1,514
Dorchester Branch	2,445	28	16	52	8	54	162	94	168	46	34	69	37	3,212	225	2,987	542	600	11	169	995
East Boston Branch	2,280	26	14	46	9	120	318	136	331	39	46	74	49	3,488	364	3,124	944	967	36	318	974
Jamaica Plain Branch	3,184	30	7	86	15	48	156	97	196	23	44	76	43	4,005	203	3,802	618	973	17	160	912
Roxbury Branch	3,563	48	11	82	19	88	361	156	364	53	68	115	58	4,986	413	4,573	1,010	1,800	27	305	1,316
South Boston Branch	3,189	56	12	71	11	119	403	167	317	48	74	69	92	4,628	439	4,189	1,000	1,013	30	432	2,978
South End Branch	1,693	14	1	34	2	99	67	247	122	40	23	85	7	2,434	224	2,210	517	1,307	14	155	2,651
West End Branch	3,126	21	4	24	1	330	236	281	545	25	13	25	16	4,647	.....	4,647	1,521	.....	28	311	1,060
West Roxbury Branch .....	.....	10	1	23	.....	25	20	77	21	.....	4	2	3	186	.....	186	186	.....	7	50	832
Station A .....	.....	3	.....	2	1	15	19	36	24	7	20	9	3	139	.....	139	139	.....	2	14	37
" B .....	.....	11	2	21	3	35	92	63	54	7	8	9	11	316	.....	316	316	.....	2	39	213
" D	139	3	.....	7	.....	11	17	26	21	4	2	3	4	237	11	226	87	5	2	23	89
" E .....	.....	4	.....	7	2	16	24	29	17	3	4	7	2	115	.....	115	115	.....	4	12	21
" F	178	7	1	9	.....	41	27	71	21	4	1	8	2	370	14	356	178	7	4	43	68
" G	249	3	1	7	.....	56	61	73	69	7	3	6	4	539	21	518	269	12	.....	108	198
" H .....	.....	4	1	5	2	28	21	54	41	4	4	6	3	173	.....	173	173	.....	.....	71	62
" J	209	5	1	4	1	41	33	59	27	3	7	4	6	400	23	377	168	11	3	94	147
" K	68	2	.....	1	.....	16	9	28	5	4	5	5	3	146	8	138	70	2	.....	23	32
" L	74	1	1	3	1	12	32	17	23	1	.....	1	1	167	7	160	86	3	.....	18	86
" M	128	3	.....	2	.....	37	26	52	39	2	1	1	3	294	10	284	156	9	1	67	142
" N	223	5	1	3	4	31	71	78	63	4	3	8	7	501	19	482	259	9	5	121	304
" P	387	8	1	11	.....	191	167	62	141	7	5	5	9	994	27	967	580	16	7	143	516
" Q	219	7	2	14	1	59	31	98	37	6	5	14	7	500	17	483	264	11	5	186	421
" R	304	3	1	9	4	61	55	97	39	3	11	9	7	593	25	568	264	18	2	107	362
" S	41	2	.....	3	.....	71	237	57	245	6	9	8	4	683	.....	683	642	2	.....	98	283
" T .....	.....	5	1	8	2	63	88	58	67	.....	.....	.....	.....	292	.....	292	292	.....	.....	41	174
Totals ..	45,006	935	101	1,222	107	4,475	3,950	5,353	4,091	1,226	544	1,705	544	69,867	4,894	64,973	19,367	15,779	791	4,165	23,189

* To whom cards were given since January 1, 1895.

N. B.—Prior to February 1, 1897, cards were supplied to Stations A, E and H through the Dorchester Branch, and to the West Roxbury Branch and Station B through the Jamaica Plain Branch, and their statistics are included in the Dorchester and Jamaica Plain reports.

Live cards outstanding January 31, 1898, 64,973; February 1, 1897, 45,006; gain, 19,367 = .4246.

CLASSIFICATION OF HOLDERS OF "LIVE CARDS"

JANUARY 31, 1898.

BY SEX AND OCCUPATION.

CLASSES.	Permanent residents.	¹ Non-residents.	Special cards.
MALES.			
<i>Over 21 years of age.</i>			
Professional classes	2,802	61	103
Teachers	374	99	7
Students	1,060	1,010	—
Business men	7,993	75	8
Unemployed	1,812	166	1
Laborers	648	—	—
<i>Under 21 years of age.</i>			
Clerks	1,291	10	—
Office and errand boys	637	—	—
Unemployed	376	4	—
Pupils of Latin and High schools	863	9	—
Pupils of Grammar schools	8,853	2	—
Pupils of Grammar schools under 12 years	205	—	—
Other students	351	55	—
FEMALES.			
<i>Over 21 years of age.</i>			
Professional classes	172	5	23
Teachers	1,518	154	11
Students	480	1,055	—
Business women	3,939	53	—
Married	8,807	28	—
Single, unemployed	7,057	450	—
<i>Under 21 years of age.</i>			
Clerks	1,424	82	—
Errand girls	190	—	—
Unemployed	949	23	—
Pupils of Latin and High schools	1,087	6	—
Pupils of Grammar schools	8,057	2	—
Pupils of Grammar schools under 12 years	278	—	—
Other students	225	23	—
Totals	61,448	3,372	153

¹ Including persons temporarily sojourning in Boston.

N.B. — Of the 1,588 teachers' cards issued prior to February 1, 1898, 997 are live cards; of these, 713 are held by permanent residents, in addition to their ordinary cards (not included in permanent residents' column above), and 284 are held by non-residents (which are included in non-residents' column above).

BY WARDS.

Ward No.	No. of card-holders	Population census of '95.	Percentage of card-holders.	Ward No.	No. of card-holders	Population census of '95.	Percentage of card-holders.
1...	1,686	21,007	.0802	14...	1,884	19,186	.0981
2...	1,069	21,588	.0509	15...	1,241	18,623	.0666
3...	1,107	13,943	.0793	16...	1,560	16,320	.0955
4...	673	13,375	.0503	17...	1,577	21,114	.0746
5...	1,077	12,686	.0829	18...	1,940	21,679	.0894
6...	1,093	27,860	.0392	19...	2,128	22,372	.0951
7...	1,742	16,973	.1026	20...	4,079	21,528	.1894
8...	4,622	23,130	.1998	21...	4,283	19,274	.2222
9...	2,648	23,174	.1142	22...	2,733	22,289	.1226
10...	7,740	22,554	.3433	23...	2,705	18,283	.1479
11...	4,468	19,930	.2241	24...	3,547	18,240	.1944
12...	4,900	21,591	.2269	25...	2,822	15,001	.1881
13...	1,619	24,900	.0650	Total	64,973	496,920	.1307

PUBLIC SCHOOLS, TEACHERS AND PUPILS,

JUNE 30, 1897.

GENERAL SCHOOLS.	Number of schools.	NUMBER OF REGULAR TEACHERS.			Number of pupils at date.
		Men.	Women.	Total.	
Normal.....	1	2	9	11	226
Latin and High.....	11	77	86	163	4,101
Grammar.....	56	119	657	776	34,015
Primary.....	529	.....	529	529	27,688
Kindergartens.....	64	.....	125	125	3,705
Totals.....	661	198	1,406	1,604	69,735
SPECIAL SCHOOLS.					
Horace Mann.....	1	.....	.....	13	112
Spectacle Island.....	1	.....	.....	1	25
Evening High.....	1	.....	.....	.....	.....
Central.....	.....	.....	.....	26	1,803
Charlestown.....	.....	.....	.....	6	186
East Boston.....	.....	.....	.....	6	151
Evening Elementary.....	12	.....	.....	145	3,082
Evening Drawing.....	5	.....	.....	27	577
Totals.....	20	.....	.....	224	5,936
Special teachers (not included above), .....	.....	21	76	97	.....
EVENING SCHOOLS.					
October, 1896-March, 1897.					
High and Elementary.....	15	.....	.....	183	3,656
Drawing.....	6	.....	.....	27	577
Totals.....	21	.....	.....	210	4,233
Grand total.....	702	219	1,482	2,135	79,904

APPENDIX VII.

CIRCULATION.

HOME USE ONLY.

	Total Circulation. Home Use.		From Central through Branches and Stations. In- cluded in Central Library Circulation.		From Branches through Stations. Included in Branch Circulation.	
	1896-97.	1897-98.	1896-97.	1897-98.	1896-97.	1897-98.
	A.	B.	Included in "A."	Included in "B."	Included in "A."	Included in "B."
Central Library.....	326,254	388,489				
Brighton	27,308	31,382	285	618		
Charlestown	53,555	57,362	688	1,046		
Dorchester	57,856	58,105	690	818		
East Boston.....	63,443	62,993	864	1,077		
Jamaica Plain.....	52,279	57,176	1,573	1,543		
Roxbury	83,708	84,691	533	647		
South Boston.....	77,999	80,912	852	861		
South End.....	83,767	82,497	1,359	1,883		
West End	81,428	109,617	885	1,477		
West Roxbury	16,658	22,496	1,187	1,898	² 629	
Station A.....		4,283	1,678	1,398	³ 2,752	³ 1,916
B	9,730	13,870	2,584	4,082	² 3,235	² 2,632
D		3,193	4,617	3,559		
E			775	1,009	³ 3,280	³ 4,255
F	5,439	12,180	2,438	1,889		
G	6,961	9,186	1,491	2,883	⁴ 261	⁴ 667
H	2,649	7,929	2,607	1,878	³ 1,726	³ 1,721
J	7,759	10,447	1,547	2,746		
K		146	2,516	3,298		
L	2,492	3,808	1,696	1,460		
M	3,218	8,484	1,428	1,557		
N	10,603	9,770	3,228	3,853		
P	12,541	26,159	1,111	1,324		
Q	9,287	16,544	2,738	3,864		
R	9,850	14,090	1,308	3,733	⁶ 976	⁶ 2,071
S	235	17,004	6	1,383		
T		2,600		1,013		
Carried forward	1,005,019	1,195,413	40,684	52,597	12,859	13,262

APPENDIX VII.—*Concluded.*

	Total Circulation Home Use.		From Central through Branches and Stations. In- cluded in Central Library Circulation.		From Branches through Stations. Included in Branch Circulation.	
	1896-97.	1897-98.	1896-97.	1897-98.	1896-97.	1897-98.
<i>Brought forward</i>	1,005,019	1,195,413	40,684	52,597	12,859	13,262
Cottage place.....		1,325				
North Bennet street.....		592				
Marcella-street Home		425				
House of Reformation ...		1,903				
Hancock School.....			10	3,937		
Engine-houses			¹ 975	¹ 5,275		
Total	1,005,019	1,199,658	41,669	61,809	12,859	13,262

¹ No. sent on deposit. No. used on premises not recorded.² Included in Jamaica Plain Branch Circulation.³ " " " " " "⁴ " " " " " "⁵ " " " " " "

	1896-97.	1897-98.	Gain.
Central Library	326,254	388,489	62,235
Branches	678,765	811,169	132,404
Total	1,005,019	1,199,658	194,639 = 19%

APPENDIX VIII.

TRUSTEES FOR FORTY-SIX YEARS.

The Hon. Edward Everett was President of the Board from 1852 to 1864; the late George Ticknor in 1865; William W. Greenough, Esq., from 1866 to April, 1888; from May 7, 1888, to May 12, 1888, Prof. Henry W. Haynes; Samuel A. B. Abbott, Esq., May 12, 1888, to April 30, 1895; Hon. F. O. Prince since October 8, 1895.

The Board for 1852 was a preliminary organization; that for 1853 made what is called the first annual report. At first it consisted of one alderman and one common councilman and five citizens at large till 1867, when a revised ordinance made it to consist of one alderman, two common councilmen and six citizens at large, two of whom retired, unless reelected, each year, while the members from the City Council were elected yearly. In 1878 the organization of the Board was changed to include one alderman, one councilman and five citizens at large, as before 1867; and in 1885, by the provisions of the amended city charter, the representation of the city government upon the Board, by an alderman and a councilman, was abolished, leaving the Board as at present, consisting of five citizens at large.

Citizens at large in SMALL CAPITALS.

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|----------------------------------|----------------------------------|
| ABBOTT, SAMUEL A. B., 1879-95. | Dennie, George, 1858-60. |
| Allen, James B., 1852-53. | DE NORMANDIE, JAMES, 1895-97. |
| APPLETON, THOMAS G., 1852-57. | Dickinson, M. F., Jr., 1871-72. |
| Barnes, Joseph H., 1871-72. | Drake, Henry A., 1863-64. |
| BENTON, JOSIAH H., JR., 1894-97. | Erving, Edward S., 1852. |
| BIGELOW, JOHN P., 1852-68. | EVERETT, EDWARD, 1852-64. |
| BOWDITCH, HENRY I., 1865-68. | Flynn, James J., 1883. |
| BOWDITCH, HENRY P., 1894-97. | Frost, Oliver, 1854-55; 1856-58. |
| Bradley, John T., 1869-70. | FROTHINGHAM, RICHARD, 1875-79. |
| Bradt, Herman D., 1872-73. | Gaffield, Thomas, 1867-68. |
| Braman, Jarvis D., 1868-69. | GREEN, SAMUEL A., 1868-78. |
| BRAMAN, JARVIS D., 1869-72. | GREENOUGH, WILLIAM W., 1856-88. |
| Brown, J. Coffin Jones, 1861-62. | Guild, Curtis, 1876-77; 1878-79. |
| Burditt, Charles A., 1873-76. | Harris William G., 1869-70. |
| Carpenter, George O., 1870-71. | Haynes, Henry W., 1858-59. |
| CARR, SAMUEL, 1895-96. | HAYNES, HENRY W., 1880-95. |
| CHASE, GEORGE B., 1876-85. | HILLARD, GEORGE S., 1872-75; |
| Clapp, William W., Jr., 1864-66. | 1876-77. |
| Clark, John M., 1855-56. | Howes, Osborne, Jr., 1877-78. |
| Clark, John T., 1873-78. | Ingalls, Melville E., 1870-71. |
| CLARKE, JAMES FREEMAN, | Jackson, Patrick T., 1864-65. |
| 1878-88. | Jenkins, Edward J., 1885. |
| Coe, Henry F., 1878. | Keith, James M., 1868-70. |
| Crane, Samuel D., 1860-61. | Kimball, David P., 1874-76. |
| CURTIS, DANIEL S., 1873-75. | Lawrence, James, 1852. |

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| <p> Lee, John H., 1834-85.
 Lewis, Weston, 1867-68.
 LEWIS, WESTON, 1868-79.
 LEWIS, WINSLOW, 1867.
 LINCOLN, SOLOMON, 1897.
 Little, Samuel, 1871-73.
 Messinger, George W., 1855.
 Morse, Godfrey, 1883-84.
 MORTON, ELLIS W., 1870-73.
 Munroe, Abel B., 1854.
 Newton, Jeremiah L., 1867-68.
 Niles, Stephen R., 1870-71.
 O'Brien, Hugh, 1879-82.
 Pease, Frederick, 1872-73.
 Perkins, William E., 1873-74.
 Perry, Lyman, 1852.
 PIERCE, PHINEAS, 1888-94.
 Plummer, Farnham, 1856-57.
 Pope, Benjamin, 1876-77.
 Pope, Richard, 1877-78.
 Pratt, Charles E., 1880-82.
 PRINCE, FREDERICK O., 1888-97.
 PUTNAM, GEORGE, 1868-77.
 Reed, Samson, 1852-53.
 RICHARDS, WILLIAM R., 1889-95. </p> | <p> Sanger, George P., 1860-61.
 Sears, Phillip H., 1859-60.
 Seaver, Benjamin, 1852.
 Shepard, Harvey N., 1878-79.
 SHURTLEFF, NATHANIEL B.,
 1852-68.
 Stebbins, Solomon B., 1882-83.
 Story, Joseph, 1855-56; 1865-67.
 THOMAS, BENJAMIN F., 1877-78.
 TICKNOR, GEORGE, 1852-66.
 Tyler, John S., 1863-64; 1866-67.
 WALKER, FRANCIS A., 1896.
 Warren, George W., 1852-54.
 Washburn, Frederick L., 1857-58.
 WHIPPLE, EDWIN P., 1868-70.
 Whitmore, William H., 1882-83.
 WHITMORE, WILLIAM H., 1885-88.
 Whitney, Daniel H., 1862-63.
 Whitten, Charles V., 1883-85.
 Wilson, Elisha T., 1861-63.
 Wilson, George, 1852.
 WINSOR, JUSTIN, 1867.
 Wolcott, Roger, 1879.
 Wright, Albert J., 1868-69. </p> |
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 LIBRARIANS.

1852 to date.

(From 1858 to 1877 the chief executive officer was entitled Superintendent.)

- CAPEN, EDWARD, *Librarian*, May 13, 1852-December 16, 1874.
 JEWETT, CHARLES C., *Superintendent*, 1853-January 9, 1863.
 WINSOR, JUSTIN, *Superintendent*, February 25, 1868-September 30, 1877.
 GREEN, DR. SAMUEL A., *Trustee, Acting Librarian*, October 1, 1877-
 September 30, 1878.
 CHAMBERLAIN, MELLEN, *Librarian*, October 1, 1878-September 30, 1890.
 DWIGHT, THEODORE F., *Librarian*, April 13, 1892-April 30, 1894.
 PUTNAM, HERBERT, *Librarian*, February 11, 1895.

APPENDIX IX.

EXAMINING COMMITTEES FOR FORTY-SIX YEARS.

The following have served on the Examining Committees for the years given. The names in *italics* are those of Trustees who have acted as chairmen of the various committees. The thirty-fourth year was from May 1 to December 31, 1885, a period of eight months, for which no Examining Committee was appointed.

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|--|---|
| Abbott, <i>Hon.</i> J. G., 1870 | Brown, Allen A., 1894. |
| Abbott, S. A. B., 1880, 1894. | Browne, Alex. Porter, 1891. |
| Adams, Brooks, 1894. | Browne, Causten, 1876. |
| Adams, Nehemiah, <i>D.D.</i> , 1860. | Buckingham, C. E., <i>M.D.</i> , 1872. |
| Adams, Wm. T., 1875. | Burdett, Everett W., 1896, 1897. |
| Alger, <i>Rev.</i> Wm. R., 1870 | Burroughs, <i>Rev.</i> Henry, Jr., 1869. |
| Amory, Miss Anna S., 1890, 1891. | Carr, Samuel, 1894. |
| Andrew, <i>Hon.</i> John F., 1888. | Carruth, Herbert S., 1892. |
| Andrews, Augustus, 1892, 1893. | Chadwick, James R., <i>M.D.</i> , 1877. |
| Appleton, <i>Hon.</i> Nathan, 1854. | Chamberlain, <i>Hon.</i> Mellen, 1894. |
| Apthorp, Wm. F., 1883. | Chaney, <i>Rev.</i> George L., 1868. |
| Arnold, Howard P., 1881. | Chase, George B., 1876. |
| Aspinwall, Col. Thomas, 1860. | Chase, George B., 1877, 1885. |
| Attwood, G., 1877. | Chéeever, David W., <i>M.D.</i> , 1894. |
| Bailey, Edwin C., 1861. | Cheeever, Miss Helen, 1896, 1897. |
| Ball, Joshua D., 1861. | Cheney, Mrs. Ednah D., 1881. |
| Bancroft, Robert H., 1894. | Clapp, William W., Jr., 1864. |
| Bangs, Edward, 1887. | Clarke, James Freeman, <i>D.D.</i> , 1877. |
| Barnard, James M., 1866. | Clarke, James Freeman, <i>D.D.</i> , 1882. |
| Barry, <i>Rev.</i> Richard J., 1895. | Clement, Edward H., 1894, 1895. |
| Bartlett, Sidney, 1869. | Coale, George, O. G., 1892, 1893. |
| Bates, <i>Hon.</i> John L., 1896, 1897. | Collar, William C., 1874. |
| Beebe, James M., 1858. | Corbett, <i>Hon.</i> Joseph J., 1896, 1897. |
| Beecher, <i>Rev.</i> Edward, 1854. | Cudworth, Warren H., <i>D.D.</i> , 1878. |
| Bent, Samuel Arthur, 1890, 1891. | Curtis, Charles P., 1862. |
| Bigelow, Jacob, <i>M.D.</i> , 1857. | Curtis, Daniel S., 1872. |
| Bigelow, <i>Hon.</i> John P., 1856. | Curtis, Thomas B., <i>M.D.</i> , 1874. |
| Blagden, George W., <i>D.D.</i> , 1856. | Cushing, Thomas, 1885. |
| Blake, J. Bapst, <i>M.D.</i> , 1897. | Dalton, Charles H., 1884. |
| Blake, John G., <i>M.D.</i> , 1883, 1891. | Dana, Samuel T., 1857. |
| Blake, Mrs. Mary E., 1894. | Dean, Benjamin, 1873. |
| Bodfish, <i>Rev.</i> Joshua P., 1879, 1891. | Denny, Henry G., 1876. |
| Bowditch, Henry I., <i>M.D.</i> , 1855. | Derby, Hasket, <i>M.D.</i> , 1895, 1896. |
| Bowditch, Henry I., <i>M.D.</i> , 1865. | Dexter, <i>Rev.</i> Henry M., 1866. |
| Bowditch, Henry P., <i>M.D.</i> , 1881. | Dillingham, <i>Rev.</i> Pitt, 1886. |
| Bowditch, J. Ingersoll, <i>LL.D.</i> , 1855. | Dix, James A., 1860. |
| Bowman, Alfonzo, 1867. | Doherty, Philip J., 1888. |
| Bowne, <i>Prof.</i> Borden P., 1896, 1897. | Donahoe, Patrick, 1869. |
| Bradford, Charles F., 1868. | Durant, Henry F., 1863. |
| Brewer, Thomas M., 1865. | Duryea, Joseph T., <i>D.D.</i> , 1880. |
| Brimmer, <i>Hon.</i> Martin, 1890, 1891. | Dwight, John S., 1868. |
| Brooks, <i>Rev.</i> Phillips, 1871. | Dwight, Thomas, <i>M.D.</i> , 1880. |

- Eastburn, Manton, *D.D.*, 1863.
 Eaton, William S., 1887.
 Edes, Henry H., 1886.
 Eliot, Samuel, *LL.D.*, 1868.
 Ellis, Arthur B., 1888, 1889.
 Ellis, Calvin, *M.D.*, 1871.
 Ellis, George E., *D.D.*, 1881.
 Endicott, William, Jr., 1878.
 Ernst Carl W., 1897.
 Evans, George W., 1887, 1888, 1889.
 Everett, Sidney, 1895.
 Farlow, John W., *M.D.*, 1892, 1893.
 Field, Walbridge A., 1866.
 Fields, James T., 1872.
 Fitz, Reginald H., 1879.
 Fitz, Walter Scott, 1894.
 Foote, Rev. Henry W., 1864.
 Fowle, William F., 1864.
 Freeland, Charles W., 1867.
 Frost, Oliver, 1854.
 Frothingham, Richard, 1876.
 Furness, Horace Howard, *LL.D.*, 1882.
 Gannett, Ezra S., *D.D.*, 1855.
 Garland, George M., *M.D.*, 1895, 1896.
 Gay, George H., 1876.
 Gilchrist, Daniel S., 1872.
 Gordon, George A., *D.D.*, 1885.
 Gould, A. A., *M.D.*, 1864.
 Grant, Robert, 1884.
 Gray, John C., *LL.D.*, 1877.
 Green, Samuel A., *M.D.*, 1863.
 Green, Samuel S., 1895.
 Greenough, William W., 1858, 1874, 1883, 1886.
 Grinnell, Charles E., 1874.
 Hale, Rev. Edward E., 1858.
 Hale, Mrs. George S., 1887, 1888.
 Hale, Moses L., 1862.
 Hale, Philip, 1893.
 Haskins, Rev. George F., 1865.
 Hassam, John T., 1885.
 Hayes, Hon. F. B., 1874.
 Haynes, Henry W., 1879.
 Haynes, Henry W., 1881, 1884.
 Hayward, George, *M.D.*, 1863.
 Heard, John, Jr., 1888, 1889, 1891.
 Heard, John T., 1853.
 Hellier, Charles E., 1895.
 Herford, Brooke, *D.D.*, 1884.
 Herrick, Samuel E., *D.D.*, 1888, 1889.
 Hersey, Miss Heloise E., 1895, 1896.
 Higginson, Thomas W., 1883.
 Hill, Clement Hugh, 1880.
 Hillard, Hon. George S., 1853.
 Hillard, Hon. George S., 1873.
 Hodges, Richard M., *M.D.*, 1870.
 Holmes, Edward J., 1881, 1884.
 Holmes, Oliver W., *M.D.*, 1858.
 Holmes, Oliver W., Jr., *LL.D.*, 1882.
 Homans, Charles D., *M.D.*, 1867.
 Homans, Mrs. Charles D., 1885, 1886, 1887.
 Homer, George, 1870.
 Homer, Peter T., 1857.
 Hubbard, James M., 1891.
 Hubbard, William J., 1858.
 Hudson, John E., 1895, 1896.
 Hunnewell, James F., 1880, 1893, 1894.
 Hutchins, Miss Emma, 1895, 1896.
 Hyde, George B., 1879.
 Irwin, Miss Agnes, 1894.
 Jeffries, B. Joy, *M.D.*, 1869.
 Jeffries, William A., 1893.
 Jenkins, Charles E., 1879.
 Jewell, Hon. Harvey, 1863.
 Jordan, Eben D., 1873.
 Kidder, Henry P., 1870.
 Kimball, David P., 1874.
 Kimball, Henry H., 1865.
 Kirk, Edward N., *D.D.*, 1859.
 Lawrence, Hon. Abbott, 1853.
 Lawrence, Abbott, 1859.
 Lawrence, Miss Harriette S., 1890.
 Lawrence, James, 1855.
 Lee, Miss Alice, 1889, 1890, 1891.
 Lee, Hon. John H., 1897.
 Lewis, Weston, 1872, 1878.
 Lincoln, Hon. F. W., 1856.
 Lincoln, Solomon, 1886.
 Little, James L., 1864.
 Lombard, Prof. Josiah L., 1863.
 Loring, Hon. Charles G., 1855.
 Lothrop, Loring, 1866.
 Lowell, A. Lawrence, 1897.
 Lowell, Augustus, 1883.
 Lowell, Edward J., 1885.
 Lunt, Hon. George, 1874.
 Lyman, George H., *M.D.*, 1885.
 McCleary, Samuel F., 1890.
 McNulty, Rev. John J., 1896, 1897.
 Manning, Rev. Jacob M., 1861.
 Mason, Rev. Charles, 1857.
 Mason, Robert M., 1869.
 Maxwell, J. Audley, 1883.
 Metcalf, Rev. Theodore A., 1888, 1889.
 Minns, Thomas, 1864.
 Minot, Francis, 1866.
 Morison, Miss Mary, 1892, 1893, 1895.
 Morrill, Charles J., 1885.
 Morse, John T., Jr., 1879.
 Morse, Robert M., Jr., 1878.
 Morton, Hon. Ellis W., 1871.
 Mudge, Hon. E. R., 1871.
 Neale, Rollin H., *D.D.*, 1853.
 Noble, John, 1882.
 Norcross, Otis, 1880.
 O'Brien, Hon. Hugh, 1879.
 O'Callaghan, John J., 1895.
 O'Reilly, John Boyle, 1878.
 Otis, G. A., 1860.
 Paddock, Rt. Rev. Benj. H., 1876.

- Parker, Charles Henry, 1888, 1889.
 Parker, *Mrs.* William L., 1897.
 Parkman, Henry, 1885.
 Parks, *Rev.* Leighton, 1882, 1896, 1897.
 Perkins, Charles C., 1871.
 Perry, Thomas S., 1879, 1882, 1883, 1884, 1885, 1890, 1891.
 Phillips, John C., 1882.
 Phillips, Jonathan, 1854.
 Pierce, *Hon.* Henry L., 1891.
 Pingree, *Miss* Lalia B., 1894.
 Prescott, William H., *LL.D.*, 1853.
 Prince, *Hon.* F. O., 1888, 1889, 1890, 1891, 1892, 1893, 1895, 1896.
 Putnam, *George*, *D.D.*, 1870.
 Putnam, *Hon.* John P., 1865.
 Randall, Charles M., *M.D.*, 1884.
 Rice, *Hon.* Alexander H., 1860.
 Robbins, Elliott, *M.D.*, 1893.
 Rogers, *Prof.* William B., 1861.
 Rollins, J. Wingate, 1888, 1889.
 Ropes, John C., 1872.
 Rotch, Benjamin S., 1863.
 Runkle, *Prof.* J. D., 1882.
 Russell, Samuel H., 1880.
 Sampson, O. H., 1892, 1893.
 Sanger, *Hon.* George P., 1860.
 Seaver, Edwin P., 1881.
 Shepard, *Hon.* Harvey N., 1888, 1889.
 Sherwin, *Mrs.* Thomas, 1893, 1894.
 Shurtleff, *Hon.* Nathaniel B., 1857.
 Smith, Azariah, 1895, 1896.
 Smith, Charles C., 1873.
 Smith, *Mrs.* Charles C., 1881, 1886.
 Smith, *Miss* Minna, 1892.
 Sowdon, A. J. C., 1892, 1893.
 Sprague, Charles J., 1859.
 Sprague, Homer B., 1882.
 Stedman, C. Ellery, *M.D.*, 1888.
 Stevens, Oliver, 1858.
 Stevenson, *Hon.* J. Thomas, 1856.
 Stockwell, S. N., 1861.
 Stone, *Col.* Henry, 1885, 1886, 1887.
 Story, Joseph, 1856.
 Sullivan, Richard, 1883, 1884.
 Teele, John O., 1886.
 Thaxter, Adam W., 1855.
 Thayer, George A., 1875.
 Thayer, *Rev.* Thomas B., 1862.
 Thomas, B. F., *LL.D.*, 1875.
 Thomas, Seth J., 1856.
 Ticknor, *Miss* Anna E., 1891.
 Ticknor, *George*, *LL.D.*, 1853, 1854, 1855, 1859, 1863, 1866.
 Tillinghast, Caleb B., 1895, 1896.
 Tobey, *Hon.* Edward S., 1862.
 Todd, William C., 1894.
 Twombly, *Rev.* A. S., 1883, 1884.
 Upham, J. B., *M.D.*, 1865.
 Vibbert, *Rev.* Geo. H., 1873.
 Wales, George W., 1875.
 Walley, *Hon.* Samuel H., 1862.
 Ward, *Rev.* Julius H., 1882.
 Ware, Charles E., *M.D.*, 1875.
 Ware, Darwin E., 1-81.
 Warner, Hermann J., 1867.
 Warren, *Hon.* Charles H., 1859.
 Warren, J. Collins, *M.D.*, 1878.
 Waterston, *Rev.* Robert C., 1867.
 Weissbein, Louis, 1893.
 Wells, *Mrs.* Kate G., 1877.
 Wendell, *Prof.* Barrett, 1895, 1896.
 Wharton, William F., 1886.
 Whipple, Edwin P., 1869.
 Whitmore, William H., 1887.
 Whitney, Daniel H., 1862.
 Whitney, Henry A., 1873.
 Wightman, *Hon.* Joseph M., 1859.
 Williams, Harold, *M.D.*, 1888, 1889, 1890.
 Williamson, William C., 1881.
 Williamson, *Mrs.* William C., 1897.
 Wilson, Elisha T., *M.D.*, 1861.
 Winsor, *Justin*, *LL.D.*, 1867.
 Winthrop, *Hon.* Robert C., 1854.
 Winthrop, Robert C., Jr., 1887.
 Wood, Frank, 1897.
 Woodbury, Charles Levi, 1871.
 Woolson, *Mrs.* Abba Goold, 1888, 1889.
 Wright, *Hon.* Carroll D., 1884.

APPENDIX X.

SCHEDULE OF LIBRARY SERVICE.

Note.—This has been brought down to May 1, 1898. The order followed is (1) by rank in grades, and (2) alphabetically, within each grade.

SUMMARY.

Central Library . . .	154	Males	79	Females	75
Branches and Reading rooms	61	"	14	"	47
	215		93		122
Evening and Sunday service.	* 57				

Extra assistance is employed at the branches.

EXECUTIVE DEPARTMENT.

Name.	Entered.	Grade.
Putnam, Herbert . . .	1895	Librarian.
Savage, Philip H. . .	1896	Librarian's Sec.
† Mooney, George V. . .	1889	B. Special.
** Bicknell, Margaret M. . .	1896	C. "
Deery, D. Jean. . .	1891	C. "
Learned, Lucie A. . .	1891	C. "
Cellarius, Theodore W. . .	1892	D. "
Nichols, Adelaide A. . .	1868	Auditor.
McFarland, Peter V. . .	1896	D. Runner.

CATALOGUE DEPARTMENT.

Whitney, James L. . .	1869	Chief.
† Swift, Lindsay . . .	1878	A. Special.
Chevalier, Samuel A. . .	1894	A. "
Hunt, Edward B. . .	1883	A. "
Murdoch, John . . .	1896	A. "
Burnell, Carrie . . .	1881	A.
Rollins, Mary H. . .	1886	A.
Seaver, Mrs. Lillian F. . .	1888	A.
Rice, Edwin F. . .	1885	B. Special.
Tenney, Mary A. . .	1897	B. "
Bartlett, Mary R. . .	1897	B.
Cutler, Dora L. . .	1887	B.
Gould, Ida W. . .	1884	B.

* Serving from three to seven evenings a week each. The total number of positions is 33, evenings; 33, Sundays.

** Auditor's Assistant. † Custodian of Stock Room. † Editor Library Publications.

	Entered.	Grade.
Hemmings, Anita F. . . .	1897	B.
Leavitt, Luella K. . . .	1895	B.
Brennan, T. Frank	1890	D. Special.
Dolan, Charles T. . . .	1894	D.

ORDERING DEPARTMENT.

Macurdy, Theodosia E. . . .	1889	Chief.
Browne, Alice	1883	B. Special.
Coolidge, Marie	1893	B. “
Frinsdorff, Emily O. . . .	1894	B.
Goddard, Mrs. Frances H. . .	1892	B.
McGrath, Mary A. . . .	1868	B.
Keleher, Alice A. . . .	1891	D. Special.
McFarland, Thomas A. . . .	1891	D. “
St. Louis, Robert E. . . .	1897	D. Runner.

SHELF DEPARTMENT.

Roffe, William G. T. . . .	1881	A. Div. 2.
*Locke, John F. . . .	1894	B.
Richmond, Bertha P. . . .	1895	B.
Connor, George H. . . .	1891	C. Special.
Reardon, John H. . . .	1896	C. “
Eberhart, John	1894	D. “
Caiger, Eliza F. A. . . .	1895	D.
Lucid, John F. . . .	1893	D.

BATES HALL.

Knapp, Arthur M. . . .	1875	Custodian.
†Blaisdell, Frank C. . . .	1876	A. Special.
Doyle, Agnes C. . . .	1885	B.
Buckley, Pierce E. . . .	1891	C.
Plunkett, Albert J. . . .	1895	D.
Hardy, Charles A. . . .	1896	D. Runner.

SPECIAL LIBRARIES.

Fleischner, Otto	1891	Custodian.
Hitchcock, Grace A. . . .	1895	B. Special.
Hall, Belle S. . . .	1895	B.
Lewis, Marian L. . . .	1897	B.
Barlow, Lillis	1897	C.
Cassidy, Margaret L. . . .	1895	D. Special.
Ward, Joseph W. . . .	1891	D. “
Hutchins, Fernald	1896	D.
Kelly, Charlotte H. . . .	1895	D.
Leonard, Michael F. . . .	1895	D.
McKiernan, John L. . . .	1896	D. Runner.
†Smith, Arthur E. F. . . .	1897	D. Runner.

* Engaged for temporary service.

† Supervisor of Patent and Newspaper Departments.

‡ Resigned, to take effect May 31, 1898.

PERIODICAL-ROOM.

	Entered.	Grade.
Wendté, Frederika . . .	1895	C.
Ford, Mary E. A. . . .	1895	D.
Maguinness, James . . .	1897	D. Runner.

NEWSPAPER-ROOM.

Serex, Frederic	1895	B.
Keenan, Matthew T. . . .	1896	D. Special.

ISSUE DEPARTMENT.

McGuffey, Margaret D. . . .	1895	Chief.
*Sheffield, Mrs. Gertrude P. . . .	1896	B. Special.
Forrest, Gertrude E. . . .	1895	B. “
Barry, Edward F.	1890	C. “
McCarthy, Michael, Jr. . . .	1892	C. “
Sheridan, Mary C.	1881	C. “
Desmond, Louise L.	1895	C.
Richards, Florence F. . . .	1875	C.
Shumway, Marion H. . . .	1895	C.
Cufflin, M. Florence	1892	D. Special.
Cunniff, Nellie L.	1895	D. “
Dowling, S. Jennie	1895	D. “
McCarthy, Marion A. . . .	1895	D. “
Murphy, Annie G.	1888	D. “
Reynolds, Mary A.	1894	D. “
Roett, Louis W.	1895	D. “
Bertram, Lucy I.	1895	D.
Connolly, Nelly L.	1895	D.
Daly, Margaret C.	1895	D.
Ethier, Lillian E.	1895	D.
Gorman, John E.	1895	D.
Kiernan, Letitia M.	1895	D.
Lucid, Joseph A.	1895	D.
Olson, Alphild	1895	D.
Olson, Bertha A.	1895	D.
Wiechmann, Catherine A. . . .	1895	D.
Williams, Grace	1895	D.
Zaugg, Joanna	1895	D.
Zaugg, Otto E.	1895	D.
Barry, Margaret M.	1897	D. Runner.
Cole, Grace E.	1897	D. “
Hagerty, Mary E.	1897	D. “
McKenzie, Kenneth	1897	D. “
McSweeney, M. Agnes	1897	D. “
Maier, William C., Jr. . . .	1897	D. “
Mayer, Harry F.	1897	D. “
Shaughnessy, Mary A. . . .	1897	D. “

	Entered.	Grade.
Stetson, Nina M. . . .	1896	D. Runner.
Bryce, Jean M. . . .	1898	E.
Campbell, Charles D. . . .	1898	E.

ISSUE DEPARTMENT, BRANCH DIVISION.

* Wellman, Hiller C. . . .	1896	Supervisor of Branches and Delivery Stations.
† Bourne, Edna L. . . .	1897	B.
Painter, Florence Mc. M. . . .	1897	B.
Heimann, Otto A. . . .	1890	C. Special.
Morse, Maud M. . . .	1877	C. “
Maier, Joseph A. . . .	1892	D. “
Conroy, Michael J. . . .	1897	D. Runner.

REGISTRATION DEPARTMENT.

Keenan, John J. . . .	1885	B. Special.
Murray, Ella K. . . .	1886	C.
Shelton, Richard B. . . .	1895	D. Special.
Fillebrown, Emily F. . . .	1895	D.

PRINTING DEPARTMENT.

	Entered.	Position.
Lee, Francis W. . . .	1894	Chief.
Geyer, Willfried H. . . .	1896	Pressman.
Greeley, Carrie P. . . .	1896	Compositor.
Land, Annie F. . . .	1896	“
Ives, Birdsey F. . . .	1896	Feeder.

BINDERY.

Ryder, Frank	1883	Foreman.
Collins, Dennis J. . . .	1887	Finisher.
Brennan, Richard M. . . .	1898	Forwarder.
Fuerst, Alexander	1896	“
Heyer, William H. . . .	1891	“
Hoeffner, George	1891	“
Ivory, John W. . . .	1893	“
Löfström, Konrad A. . . .	1892	“
Murphy, John F. . . .	1883	“
Hemstedt, William P. . . .	1883	Pressman.
Bowen, Mrs. Sarah E. . . .	1876	Sewer.
Doiron, Joanna	1896	“
Kiley, Margaret J. . . .	1889	“
Moriarty, Mary G. . . .	1875	“
Nolen, Sarah	1891	“
Potts, Ellen F. . . .	1892	“
Soule, Ellen E. . . .	1891	“

* Resigned, to take effect May 31, 1898.

† Resigned, to take effect June 18, 1898.

ENGINEER AND JANITOR DEPARTMENT.

	Entered.	Position.
Niederauer, Henry . . .	1894	Chief Engineer..
McCready, Alexander . . .	1895	Engineer.
Malone, John P. . . .	1895	Engineer.
O'Neill, Harry	1896	"
Zittel, George, Jr. . . .	1891	"
Herland, Nils J. . . .	1895	Fireman.
Moran, John A.	1894	"
Karlson, Charles W. . . .	1896	Book Motors.
* Williams John L. . . .	1886	Janitor.
McCarty, Dennis	1888	Watchman.
McGee, Alexander D. . . .	1896	Painter.
Wall, Frank A.	1897	Carpenter.
Hanna, William T. . . .	1895	Marble polisher.
Goode, Robert	1895	Elevator. }
Cole, William E.	1898	Coat room. }

EAST BOSTON BRANCH.

	Entered.	Grade.
Walkley, Ellen O. . . .	1897	C. Special.
Brackett, Marian W. . . .	1897	C.
Wing, Alice M.	1873	C.
Bickford, Lillian A. . . .	1891	D.
Hosea, George H.	1873	Janitor.
Taylor, Charles F. . . .	1897	"

SOUTH BOSTON BRANCH.

Bullard, N. Josephine . . .	1883	C. Special.
Eaton, Ellen A.	1873	C.
Sampson, Idalene L. . . .	1878	C.
McQuarrie, Annie C. . . .	1894	D.
Orcutt, Alice B.	1887	D.
Sumner, Alice F.	1897	D.
Baker, Joseph	1872	Janitor.

ROXBURY BRANCH.

Bell, Helen M.	1878	C. Special.
Berry, Elizabeth C. . . .	1883	C.
Puffer, Dorothy	1878	C.
Griggs, Sarah W.	1886	D.
Lynch, Gertrude A. . . .	1894	D.
Monahan, William	1883	Janitor.

CHARLESTOWN BRANCH.

Cartée, Elizabeth F. . . .	1886	C. Special.
Livermore, Mrs. Susan E. .	1885	C.
Reagen, Elizabeth R. . . .	1895	C.

* Charge of book motors, evenings.

	Entered.	Grade.
O'Neill, Margaret M. . . .	1892	D.
Rogan, Katharine S. . . .	1896	D.
Smith, Thomas E. . . .	1874	Janitor.

BRIGHTON BRANCH.

Hobart, Martha N. . . .	1896	C. Special.
Conley, Ellen F. . . .	1891	C.
Dale, M. Florence	1895	D.
Brock, James M. . . .	1878	Janitor.

DORCHESTER BRANCH.

Reed, Mrs. Elizabeth T. . . .	1873	C. Special.
Griffith, Mary E. . . .	1886	C.
Donovan, Mary G. . . .	1891	D.
Hufton, Nellie E. . . .	1896	D.
Meffen, Margaret	1892	D.
Davenport, Edward	1875	Janitor.

SOUTH END BRANCH.

Sheridan, Margaret A. . . .	1875	C. Special.
McGrath, Amelia F. . . .	1888	C.
Lynch, Emma F. . . .	1885	D.
Meehan, Margaret F. . . .	1893	D.
Mulloney, William J. . . .	1892	D.

JAMAICA PLAIN BRANCH.

Swain, Mary P. . . .	1877	C. Special.
Riley, Nellie F. . . .	1878	C.
Albert, Katie F. . . .	1892	D.
Kenney, Thomas W. . . .	1897	Janitor.

WEST END BRANCH.

Davis, Mrs. Eliza R. . . .	1877	C. Special.
Barton, Margaret S. . . .	1885	C.
Forbes, George W. . . .	1896	C.
McKirdy, Alice E. . . .	1896	C.
Mooney, Katharine G. . . .	1885	C.
Kiley, Mary E. . . .	1896	D.
Riley, Mary E. . . .	1891	D.
Porter, Frank C. . . .	1896	D. Runner.
Rossiter, John	1896	Janitor.

WEST ROXBURY BRANCH.

Morse, Carrie L. . . .	1890	D. Special.
Woods, Eugene B. . . .	1898	Janitor.

DELIVERY STATIONS.

Station.	Custodian.	Grade.
A. Lower Mills Reading room	Hill, M. Addie.....	D. Special.
B. Roslindale Delivery Station	Davis, William W.	
C. West Roxbury Branch	See above.....	
D. Mattapan Reading-room	Capewell, Mrs. Emma G.,	D. Special.
E. Neponset Delivery Station.....	Barnes, Charles D.	
F. Mt. Bowdoin Reading-room	Fairbrother, Mrs. Eliz.G.,	D. Special.
G. Allston Delivery Station.....	Bernard Drug Company.	
H. Ashmont Delivery Station	Weymouth, Clara E.	
J. Dorchester Sta. Delivery Station ..	Sexton, Mrs. Annie M.	
K. Bird-st. Delivery Station.....	Morris, Antoinette.	
L. No. Brighton Reading-room	Muldoon, Katherine F. . .	D. Special.
M. Crescent ave. Delivery Station.....	Johnson, Charles E., & Co.	
N. Blue Hill ave. Delivery Station....	Riker, Mrs. S. A.	
P. B'way Extension Delivery Station..	Ward, Langdon L.....	D. Special.
Q. Upham's Corner Delivery Station..	Bird, Mrs. Thomas H.	
R. Warren-st. Delivery Station	Eaton, Charles T.	
S. Roxbury Crossing Delivery Station.	Bollog, Emma.....	D. Special.
T. Boylston Delivery Station.....	Locke, Joseph B.	

EVENING AND SUNDAY SERVICE.

6 P.M. TO 10 P.M. WINTER SCHEDULE.

SUNDAYS, 2 TO 10 P.M.

BATES HALL.

Officers in Charge.

	Hours.
Chevalier, Samuel A. See Issue Department .	4
Fleischner, Otto	8
Hunt, Edward B.	10
Swift, Lindsay	10

Assistants.

Roffe, William G. T.	9 $\frac{1}{2}$
Walsh, William A. See Fine Arts	15 $\frac{1}{2}$

Central Desk.

Buckley, Pierce E. See Issue Department	8
Reardon, John H. See Deliverers of Books	4
Williams, David L.	20

Care of Reference Books.

Heimann, Albert E.	24
Plunkett, Albert J. See Fine Arts Assistants	8

Collectors of Slips.

Pitts, James A.	16
Lucid, John F.	9

Runner.

Beckford, Fred A.	25
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ISSUE DEPARTMENT.

Officers in Charge.

Blaisdell, Frank C.	20
Buckley, Pierce E. See Central Desk	4
Chevalier, Samuel A. See Bates Hall	8

Receiver of Books.

Blaisdell, Fred W.	25
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Deliverers of Books.

Reardon, John H. See Central Desk	13
Clarke, William S. See Indicator. Runners	12

Care of Indicator.			Hours.
Clarke, William S.	See Deliverers of Books.	Runner.	13
Hannigan, Walter T.	See Care of Tubes	.	12
Care of Slips.			
Heimann, Otto A.	.	.	7
Hughes, John A.	.	.	18
Care of Tubes.			
Hannigan, Walter T.	See Indicator	.	13
Hardy, Charles A.	See Runners	.	6
Tenny, Robert M.	See Runners	.	6
Care of Carriers.			
Hannigan, Frank J.	.	.	25
Runners.			
Campbell, Charles D.	.	.	16
Clarke, William S.	See Indicator.	Deliverers of Books,	7
Connors, Timothy J.	.	.	25
Currier, Ulysses S. G.	.	.	7
Doyle, Charles A.	.	.	25
Eberhart, John	.	.	9
Ford, Daniel J.	See Desk Attendant	.	7
Glover, John H.	.	.	9½
Gorman, John E.	.	.	9½
Hardy, Charles A.	See Care of Tubes	.	7
Hemstedt, William P.	See Patent room	.	12
Hughes, Thomas F.	.	.	9
McFarland, Peter V.	.	.	9
Martin, D. Clifford	.	.	25
Roett, Louis W.	See Fine Arts.	Extra Assistant	6
Russell, J. Edward	.	.	16
Tenny, Robert M.	See Care of Tubes	.	19
Weller, Waldo W.	.	.	18
Desk Attendant.			
Ford, Daniel J.	See Runners	.	25

BARTON LIBRARY.

In Charge.

Lee, Francis W.	.	.	20
Tiffany, Edward	.	.	12

Assistant.

Smith, Arthur E. F.	.	.	32
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FINE ARTS DEPARTMENT.

In Charge.

Bourne, Frank A.	.	.	20
Walsh, William A.	See Bates Hall Assistants	.	12

Assistants.

Leonard, Michael F.	.	.	9
Plunkett, Albert J.	See Reference Books	.	3½
Ward, Joseph W.	.	.	12½

LIBRARY DEPARTMENT.

131

Extra Assistant.

Roett, Louis W.	See Runners	.	.	.	.	Hours.
						4

PERIODICAL ROOM.

Connors, John F.	.	.	.	.	.	.	32
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REGISTRATION DESK.

Fallon, William E.	.	.	.	.	.	.	21 $\frac{1}{2}$
Keenan, John J.	.	.	.	.	.	.	3 $\frac{1}{2}$

PATENT ROOM AND JUVENILE LIBRARY.

Attendants.

Doyle, Agnes C.	.	.	.	.	.	.	6
Hall, Belle S.	.	.	.	.	.	.	8 $\frac{1}{8}$
Owen, Marion L.	.	.	.	.	.	.	10 $\frac{2}{8}$

Assistant.

Trueman, Nelson G.	.	.	.	.	.	.	32
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Extra Assistant.

Hemstedt, William P.	See Runners	.	.	.	.	4
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NEWSPAPER ROOM.

Attendants.

Brennan, T. Frank	.	.	.	.	.	.	12
Connor, George H.	.	.	.	.	.	.	16
Keenan, Matthew T.	.	.	.	.	.	.	4

REPLACEMENT OF BOOKS.

Barry, Edward F.	.	.	.	.	.	.	12 $\frac{1}{2}$
McCarthy, Michael, jr.	.	.	.	.	.	.	12 $\frac{1}{2}$

APPENDIX XI.

SYSTEM OF SERVICE.

AS IN FORCE MAY 1, 1898.

The system of graded service with provision for examinations as set forth in Article VI. of the By-laws quoted below was adopted by the Trustees in April, 1895. Employees then in the service were graded thereunder. The application of the system to such employees was, however, made with this proviso: that it should not of itself entitle any employee to an increase of salary nor subject him to a decrease. In many cases, therefore, the salaries of present employees do not yet accord precisely with the salaries of the grades under which they are classed. But increases of salary that may be recommended on the ground that the service rendered is entitled to higher pay will be made only in accordance with the system. And all promotions, as well as new appointments, will be made in accordance with the system.

EXTRACTS FROM BY-LAWS.

ARTICLE VI., SECTION 1. — *Examinations.* Semi-annually, or oftener if expedient, examinations shall be held under the direction of the Librarian, for admission, by promotion or otherwise, to all grades of employment in the Public Library, except the positions of Librarian, Assistant Librarian, Librarian's Secretary, Auditor, Chief Cataloguer, Chief of Shelf Department, Custodian of Bates Hall, Chief of Ordering Department, Chief of Issue Department, Supervisor of Branches and Stations, Chief Engineer, Chief of Printing Department, and Chief of Bindery.

From the list of those persons who have successfully passed the examinations of the grade in which they seek employment, appointments shall be made by the Trustees upon nomination by the Librarian in consultation with the head of the department in which the appointment is to be made.

ARTICLE V., SECTION 2. — *Vacations and other Absences.* All persons regularly employed in the Library, except persons employed in the Engineer's or Janitor's departments, or in the Bindery, shall be entitled to a vacation at the rate of twenty-four days for each year in the service, exclusive of legal holidays, and of the weekly half-holiday allowed by the city ordinance, to be arranged by the Librarian. No allowance shall be made for absence from duty except as above provided.

SECTION 3. The President or Librarian shall have power to suspend, with loss of pay, any person in the Library service until the first succeeding meeting of the corporation.

The following notice and application blank are furnished to applicants for employment in the library service :

NOTICE TO APPLICANTS FOR EMPLOYMENT.

Applications must be made upon the printed blanks furnished by the Library. Examinations for applicants will be held from time to time as the needs of the service may require. Each applicant will be notified of the examination to be held next after the filing of his application.

The examinations are not strictly competitive. Other capacities being equal, preference will be given to persons attaining the highest mark; but in making selections from among those who have taken the examination, other elements of fitness for the particular positions to be filled will be taken into account.

The purpose of the examination being not to test the intelligence of the applicants by an absolute standard, but rather to range the applicants according to the relative intelligence displayed by them, no absolute pass-mark is fixed; nor is any certificate or diploma given, but candidates will, if they desire, be informed of their relative rank among those who have taken examinations for the same grade.

The examination, moreover, is regarded as a preliminary test merely. It must be followed by a test of capacity in actual service during a probationary period. And all appointments to the service, even where carrying pay, are provisional and conditioned upon proof of capacity for the particular positions to be filled as shown in actual service.

The entire library service (excepting the Engineer, Janitor, and Printing Departments and the Bindery, and the Sunday and Evening service which is paid by the hour) is divided into grades. Each grade begins with a minimum salary and progresses, by an annual increase, to a maximum. No such increase, however, will be paid, unless the work of the employee has proved satisfactory to the Trustees. The maximum reached, no further increase is possible, except by promotion to a higher grade. Such promotion also is based upon an examination, combined, however, with certificate of capacity from the head of the department in which the employee has served.

The ordinary grades are supposed to provide for positions where academic knowledge is necessary; the special grades for those positions where special capacities (as knowledge of type-writing, executive ability, etc.) are more particularly required.

The grades are as follows :

		1st year, per week.	2d year, per week.	3d year, per week.	4th year, per week.
Grade E	.	\$3 50	\$4 00	\$4 50	
" D	.	5 00	6 00	7 00	
" D (for runners)		5 00	5 50		
" C	.	7 50	8 50	9 50	\$10 50
" B	.	11 00	12 00	13 00	14 00
" A Div. I.	.	18 50	19 50		
" A Div. II.	.	21 50	22 50		
" D Special	.	7 00	8 00	9 00	10 00
" C	"	12 00	13 00	13 50	
" B	"	14 00	15 50	17 50	
" A	"	23 50	25 50	27 50	

It is expected that vacancies in Grade A will be filled by promotion from Grade B after examination.

Persons who have entered the Library service as runners in Grade E, and are certified by the head of the department to have performed satisfactorily the duties of Grade E and to have acquired a knowledge of location requisite for Grade D, may, upon recommendation of the Librarian, at the end of six months from the date when they entered the service, be promoted to Grade D.

The qualifications for the various general grades, so far as the requirements of the general examination are concerned, are as follows :

Grade A.

Knowledge of Foreign Languages.
General History and Literature.
Library Science.
Experience in this Library.

Grade B.

Equivalent of College Education.
Knowledge of at least two Foreign Languages.
General History and Literature.
Library Science (if required).

Grade C.

Equivalent of High School Education.
Knowledge of one Foreign Language.

Grade D.

Equivalent of Grammar School Education.
Knowledge of location and system in this Library.

Grade E.

Equivalent of Grammar School Education.

Applicants for positions in the higher grades must satisfy the examiners of their ability to pass the examinations for all the grades below that for which they make application.

To the above general qualifications must be added in each case such special qualifications as may be requisite for the particular positions to be filled.

HERBERT PUTNAM,
Librarian.

APPLICATION BLANK.

I hereby make application to be examined for a position in Grade _____ of the Public Library service of the city of Boston.

As part of my application I declare the answers to the following questions to be true and in my own handwriting.

Each question must be answered or the blank will be returned.

1. Are you married or single?
2. Where do you reside and what is your post-office address?
(Give town or city, including street and number.)
3. How long have you been a resident of said city or town?
4. What is the date and place of your birth?
5. What is your father's and mother's full name? Give name, whether living or dead.
6. Have you ever been examined for the public service in any State or city? If so, when, where, for what branch and grade of the service, and with what result?
7. Are you in good health? Have you any mental or physical incapacity of which you are aware?
8. What is your present occupation and what has been your past occupation? Give places and dates of employment as near as you can.
9. In what schools, academy, or college were you educated? Give the name and length of course in each.
10. Have you any experience, or do you possess any special qualifications, such as a knowledge of book-keeping, stenography, typewriting, foreign languages, or a familiarity with other branches of knowledge, which, in your opinion, would be useful in the service of the Public Library, and not included among the requirements for the grade in which you are an applicant?

[Signature].....

Boston, _____, 189

When filled out, fold THrice and return to the Librarian of Public Library. Enclose any recommendations you desire to submit.

APPENDIX XII.

CORRESPONDENCE, BEQUESTS, ETC.

BOSTON, March 15, 1897.

HERBERT PUTNAM, ESQ.,

Librarian, Boston Public Library :

DEAR SIR: Two or three weeks ago I spoke to you about giving to the Boston Public Library some books and pamphlets from the library of Dr. Gould. They have been taken from the shelves and all piled together in one room at 29 Kirkland street, Cambridge, and are ready for you to take at any time when you will send for them. There are books, pamphlets and a few maps. Before you send for them, will you please write to Miss S. Z. Preble, 29 Kirkland street, giving her, say, twenty-four hours' notice of the time your men will call, so that she may be on hand to point out the books?

The gift is from Dr. Gould's children to the Boston Public Library, and is made absolutely, without condition or restriction. The Library is to do as it sees fit with the books, pamphlets and maps. But it would please the givers if a few of the best of the books — especially if some of the scientific works concerning the Argentine Republic — might be marked "From the gift of the children of B. A. Gould," and kept by the Library.

Acknowledgment should be made to

ALICE BACHE GOULD, MARY QUINCY THORNDIKE, BENJAMIN A. GOULD,	}	<i>Children of B. A. Gould,</i>
--	---	---------------------------------

to my care.

Yours truly,
(Signed)

ALBERT THORNDIKE.

114 BEACON STREET, BOSTON, April 29, 1897.

HERBERT PUTNAM, ESQ.

DEAR SIR: Will you kindly present the following communication to the Trustees of the Boston Public Library?

Yours very truly,
(Signed)

J. T. COOLIDGE, JR.

BOSTON, April 29, 1897.

To the Trustees of the Boston Public Library :

The undersigned present their compliments to the Trustees of the Boston Public Library and beg them to accept seventeen

paintings by Howard Pyle, representing scenes in the life of Washington and in colonial times, in order that they may be hung and properly cared for in one of the rooms of the Library in Boston.

Respectfully,

Massachusetts Society of the Colonial Dames of America,
Warren and Prescott Chapter of the Daughters of the
American Revolution, Mrs. Huntington Wolcott, Mrs. S. D.
Warren, Mrs. D. P. Kimball, Misses Mason, Mrs. J. C.
Phillips, Miss M. A. Bigelow, Mrs. James T. Fields, Mrs.
C. E. C. Waters, Mrs. C. P. Coffin, Mrs. Roger Wolcott,
Mrs. G. B. Blake, Mrs. S. Eliot, Miss M. Mixter, D. W.
Ross, A. Hemenway, J. N. Black, John L. Gardner, A. A.
Carey, Dr. W. S. Bigelow, Dr. A. T. Cabot, Edward
Wheelwright, W. S. Scudder, G. A. Goddard, E. S. Morse,
B. I. Gilman, James F. Almy, T. F. Hunt, W. P. Blake,
J. T. Coolidge, Jr.

99 MOUNT VERNON STREET, BOSTON, April 30, 1897.

HERBERT PUTNAM, Esq.,

Librarian, Boston Public Library :

MY DEAR SIR: Enclosed find my check, No. 4874, for \$5,000, to your order, as a payment on account of the Twentieth Regiment Monument Fund, to be used for the purchase of books of a military and patriotic character to be placed in the alcove appropriated as a memorial of the Twentieth Regiment. I also enclose a receipt for the same, and remain, with great respect,

Yours, very sincerely,

JOHN C. ROPES,

Treasurer of the Twentieth Regiment Monument Fund.

BOSTON, May 6, 1897.

HERBERT PUTNAM, Esq.,

Librarian Public Library, Boston, Mass.:

MY DEAR SIR: I thank you for your favor of the 1st inst., and also for your receipt for \$5,000, received from me as treasurer of the Twentieth Regiment Monument Fund. You are quite right in supposing that we intend this sum as a fund for investment, the income of which is to be used for the care of the alcove and the purchase of books of a military and patriotic character.

With great regard, I am yours very sincerely,

(Signed)

JOHN C. ROPES.

CAMBRIDGE, MASS., April 30, 1897.

To the Trustees and Librarian of the Boston Public Library :

GENTLEMEN: At the last meeting of the Boston Browning Society the following recommendation was presented by the Council, namely:

"We recommend that the books (constituting the Library of the Browning Society) be immediately placed in the care of the Boston Public Library, without conditions, further than are implied by the expressed wish that they be kept together as a reference collection so long as the well-being of the Public Library itself permits, and that they be made fully accessible under the same rules that the Public Library maintains in the case of other similar collections."

This recommendation was heartily adopted, and it is now our duty and privilege to transfer the books to your care.

Of the value of this collection you are already aware. We are glad to place it where it will be of far larger service than it could be in the private possession of the society.

Will you kindly indicate your wishes as to the removal of the books to Mrs. J. Mason Marean, 46 Brewster street, Cambridge, Mass.

Respectfully yours,

PHILIP S. MOXOM, *President.*

EMMA E. MAREAN, *Librarian.*

JOSHUA KENDALL, *Chairman of Executive Committee.*

Library Committee of the Boston Browning Society.

BOSTON, MASS., May 10, 1897.

To the Trustees of the Boston Public Library:

GENTLEMEN: As a committee representing the Papyrus Club of Boston, we tender for your acceptance from the members of that club as a fund in memory of their late member, John Boyle O'Reilly, the sum of \$1,000.

We ask your acceptance of this fund under the following conditions: The fund is to be held and invested by you and your successors, and the income thereof as the same shall accrue is to be expended for the purchase of books for the Boston Public Library. There shall be inserted and maintained in every book purchased from the proceeds of this fund, a book-plate of a design to be offered by us and approved by you, to be printed from a plate which we will give with the donation.

Should the fund at any time, by depreciation or otherwise, become impaired from the original sum of \$1,000 the income therefrom shall accumulate and be added to the principal until the original amount of \$1,000 shall be restored.

We trust that by this permanent memorial, the Papyrus Club may testify its appreciation of John Boyle O'Reilly, whose influence in this community was an inspiration in the cause of education, and may also advance the public interests which are in your keeping.

Yours respectfully,

BENJAMIN KIMBALL,

T. R. SULLIVAN,

GEO. F. BABBITT,

Committee of the Papyrus Club.

85 BEACON STREET, BOSTON, May 11, 1897.

DEAR MR. PRINCE: AS you are one of the Trustees of the Public Library, I write to ask you whether there is to be an Art room there? If so, I wish to present to it a bust of " Powers's Greek Slave," if the Trustees will accept it. It rests on a pedestal of pink Spanish marble.

Yours very sincerely,

(Signed)

MARGARET S. OTIS.

Bequest of Caleb Davis Bradlee, D.D., late of Brookline; died May 1, 1897. Will dated December 26, 1896; proved, May 19, 1897.

I give to the City Library, Boston, Mass., one thousand dollars.

I give, devise and bequeath to Charles U. Cotting and Samuel Bradlee Doggett, of Boston, Mass., *in trust*, all the rest of my property, real, personal or mixed, which I may now possess or may hereafter acquire, and I desire them to invest the same from time to time as occasion may require, making as few changes as possible in such securities as they may deem best, always having more regard for the security than for the income to be derived therefrom, and after deducting the necessary expenses for the care of the same, to pay over the income thereof, each three months, to my wife, Caroline Bradlee, during her life; and at her decease I hereby order that the trust shall continue, and I desire that the interest each three months shall be paid to my daughter, Eliza Williams Bradlee Smith, as long as she shall live, and at her death, I desire that the trust shall continue and that the interest shall be paid to her child or children during life, and at the death of her child or children, the principal and interest not paid shall be divided equally between Tufts College, Home for Aged Couples, Roxbury, New England Historic Genealogical Society, City Library of Boston, Town Library of Brookline, Mass., with the exception of my lot at Mount Auburn; that lot, in case of the decease of my wife and daughter, I give in trust to Mount Auburn Cemetery, desiring that the right of burial shall be allowed to my wife, child and grandchild or grandchildren.

.

Bequest of John C. Paige, late of Boston, died on May 8, 1897. Will dated January 28, 1897; proved May 27, 1897.

Sixth. All the rest and residue of the property and estate of which I may die seized or possessed I give, bequeath and devise to Josiah H. Benton, Jr., and William R. Gray, of Boston, and

their successors, in trust for the following uses and purposes, to wit:

I. To hold, manage, sell, invest and reinvest in such manner as they shall from time to time deem safe and prudent, and to pay over to my Mother, Ann L. Paige, from the income and principal, if necessary, of said property and estate, such sums as she may from time to time request, not to exceed the sum of six thousand dollars (\$6,000) per annum.

II.

III. After the death of my Mother, Ann L. Paige, I direct said Trustees to dispose of the residue and remainder of said property and estate then remaining in their hands and not hereinabove otherwise disposed of, in the following manner:

1-9, inclusive. Bequests aggregating \$50,000.

10. To pay the residue and remainder of said property and estate then in their hands not hereinabove otherwise disposed of to the Trustees of the Public Library of the City of Boston, the income thereof to be applied to the uses and purposes of that corporation, it being my desire that the same shall be used so far as may in the judgment of the Trustees be expedient for the purposes of the Children's Reading-room.

MAYOR'S OFFICE, CITY HALL, BOSTON, October 26, 1897.

To the City Council:

I transmit herewith a letter addressed to me by Mr. William C. Todd, offering, upon certain conditions, to give to the city in trust the sum of \$50,000, the income to be expended for the purchase of current newspapers, to be placed in the Public Library.

I believe that this liberal gift, for such a useful purpose, coming from a gentleman who is not even a citizen of Boston, should be promptly and gratefully accepted, and I recommend the passage of the accompanying order, providing for the carrying out of the conditions imposed by Mr. Todd.

Respectfully submitted,

(Signed) JOSIAH QUINCY, *Mayor*.

ATKINSON, N. H., October 21, 1897.

HON. JOSIAH QUINCY,

Mayor of the City of Boston:

DEAR SIR: Impressed with the increasing importance and influence of newspapers, and the great demand for them by all classes of the community, I addressed, June 16, 1893, while the new building was in process of erection, a communication to the Trustees of the Public Library, offering to pay two thousand dollars annually for the purchase of newspapers, if the Trustees would connect with the Library a newspaper department. My

proposition was accepted. After three years' experience of its operation, the Librarian has assured me of its success, of the increasing interest shown in it by citizens and strangers, and of its value as a part of the Library. I have been paying two thousand dollars annually since its opening, and wish to insure that amount permanently for the maintenance of this newspaper department of the Library.

I therefore offer to give to the City of Boston the sum of fifty thousand dollars, provided that the City Government requires its City Treasurer to accept this sum, hold the same in trust, and expend the income annually in payment for such current newspapers of this and other countries, as the board of officers for the time being having charge of the Public Library of the city shall purchase, the same to be kept in a suitable room in the building in which the Central Public Library is now or may hereafter be located, and use no part of said income for the maintenance of the department where such newspapers are kept, or for any other purpose than the payment for such newspapers, it being my desire that the whole of the annual income shall be used solely for the purchase of newspapers; and provided further, that the City Government authorizes the Mayor of the city to execute and deliver to me an agreement of the city that if the annual income from said fund shall in any year be less than two thousand dollars, the city will appropriate the necessary amount to make the income up to two thousand dollars, to carry out the purposes for which this fund is given.

This gift is subject to the understanding that said board or officers shall have the entire discretion as to the length of time which the newspapers are to be kept on file, or to be preserved, or as to their disposal, and as to the restrictions and regulations under which the use of said newspapers shall be enjoyed.

I am not a citizen of Boston, but regard it as a city of rare privileges, and it will certainly be one of them to have free access to representative newspapers of the world. It is the metropolis of New England, the centre of a large and cultivated population, and the attractive resort at all times of strangers from every section of the globe, ever anxious to see their home papers. I repeat, as I said in my communication of June 16, 1893, that my only interest in this matter is the wish to do some good to a great many people.

If this proposal meets your approval, I would ask that you submit the matter to the City Council, and request that, if it meets their approval, such steps may be taken as will enable me to pay this money to the city at once.

Respectfully,

(Signed)

WILLIAM C. TODD.

CITY OF BOSTON,
IN BOARD OF ALDERMEN, October 26, 1897.

Ordered, That the city gratefully accepts the gift of fifty thousand (\$50,000) dollars tendered by William C. Todd, Esquire,

and agrees to hold the same in accordance with the terms of his gift;

That the City Treasurer receive said sum, hold the same in trust, and expend the income thereof only for the payment of such current newspapers of this and other countries as the board or officers for the time being having charge of the Public Library of the city shall purchase, and that His Honor the Mayor execute and deliver to said William C. Todd, an agreement of the city that, if said income shall in any year be less than two thousand (2,000) dollars, the city will appropriate such sum as will make the sum to be expended for the purchase of newspapers as aforesaid two thousand (2,000) dollars;

That the board or officers for the time being having charge of the Public Library of the city annually expend the sum of two thousand (2,000) dollars in the purchase of such current newspapers of this and other countries as they shall deem proper, and keep the same open to the inspection of the public in a suitable room in the Central Public Library Building for such period, and under such regulations and restrictions, and subject to such final disposal, as they shall deem proper.

Passed unanimously. Sent down for concurrence.

October 28 came up concurred unanimously.

Approved by the Mayor, October 30, 1897.

A true copy.

Attest:

(Signed) JOHN T. PRIEST,
Assistant City Clerk.

BOSTON, January 21, 1898.

GENTLEMEN: The Boston Numismatic Society, at its annual meeting January 14, voted to give to the Public Library of Boston its collection of books and pamphlets, and also the sum of \$300 for the benefit of the study of numismatics, with no other condition.

Yours respectfully,
(Signed) WM. S. APPLETON,
Secretary of the Boston Numismatic Society.

BOSTON, June 29, 1896.

DEAR MR. KNAPP: I would be pleased to present the marble bust of Franklin, by Horatio Greenough, to the Boston Public Library. If you will send for it you can have it at any time.

Yours truly,

(Signed) FRANK WOOD.

BOSTON, January 24, 1898.

DEAR MR. PUTNAM: I saw a notice in Saturday's paper that the Franklin bust had been accepted; with a statement that it

was supposed to be by Greenough. I do not think it was by Greenough. The party I purchased it from said he obtained it from Horatio Greenough, and I have little doubt that his brother Alexander Greenough used it as a model for the head of the Franklin statue in front of City Hall. I am of the belief that it was by Ceracchi, a Corsican sculptor who came to this country during Franklin's lifetime and made two busts of him studied from life. One was illustrated in the "McClure Magazine" article on Franklin portraits last year. This is, so far as I could see, an exact *fac-simile* of that bust. I think it more than possible that it is the second bust spoken of in the article, which in some way fell into Horatio Greenough's possession. I think the matter worth investigating, as, if it is an original Ceracchi bust it is very valuable. It impressed me as the best and most characteristic portrait bust of Franklin that I ever saw.

Yours truly,

(Signed)

FRANK WOOD.

APPENDIX XIII.

GIFTS.

See also pp. 2, 6, 9, 10, 15, 16, 20-29 of main body of report.

Givers	1,776
Volumes	10,951
Numbers	16,780
Photographs, engravings, etc.	939
Newspaper subscriptions. (Gift of the publishers)	95

1. ENDOWMENTS.

April, 1897. From the Twentieth Regiment Association, Massachusetts Volunteer Infantry, the sum of	\$5,000 00
May, 1897. From the Papyrus Club of Boston, the sum of	1,000 00
October, 1897. From William C. Todd, Esq., of Atkinson, N. H., the sum of	50,000 00
November, 1897. From the estate of the late Rev. Caleb D. Bradlee, of Brookline, the sum of	1,000 00

2. WORKS OF ART.

Nineteen oil paintings by Howard Pyle, from the following donors: J. Templeman Coolidge, Jr., Mass. Society of the Colonial Dames of America, Warren and Prescott Chapter of the Daughters of the American Revolution, Mrs. J. Huntington Wolcott, Mrs. S. D. Warren, Mrs. D. P. Kimball, Misses Mason, Mrs. J. C. Phillips, Miss M. A. Bigelow, Mrs. James T. Fields, Mrs. C. E. C. Waters, Mrs. C. P. Coffin, Mrs. Roger Wolcott, Mrs. G. B. Blake, Mrs. S. Eliot, Miss M. Mixter, D. W. Ross, A. Hemenway, J. N. Black, John L. Gardner, A. A. Carey, Dr. W. S. Bigelow, Dr. A. T. Cabot, Edw. Wheelwright, G. A. Goddard, E. S. Morse, B. I. Gilman, J. F. Almy, T. F. Hunt, W. P. Blake, W. S. Scudder.

Bust of Benjamin Franklin, from Frank Wood, Esq., of Boston.
Bust of John Boyle O'Reilly, from the City of Boston.

Copy of the bust of Powers' Greek Slave, from Mrs. Margaret S. Otis.

Portrait of Edward C. Cabot (for deposit), from the Boston Society of Architects.

3. MISCELLANEOUS GIFTS OF MONEY.

From the Twentieth Regiment Association, M.V.I. :

For books	\$407 03
For service	368 00
	\$775 03
From Mrs. John A. Lewis	26 00
From the Boston Numismatic Society	300 00
Photograph fund	1,321 00

List of donors : Miss Mary S. Ames, G. R. Barrett, Miss Elizabeth H. Bartol, Boston Society of Architects, Mrs. Leroy Brown, Miss Alice F. Carey, Miss Alice S. Cheney, Miss Mabel P. Cook, A Friend, through Miss M. B. Proctor, Mrs. O. B. Frothingham, Mrs. G. S. Hale, Harris School, first class, Augustus Hemenway, Miss Catherine I. Ireland, Jonathan A. Lane, Mrs. M. A. C. Livermore, Mrs. F. G. Macomber, Albert Matthews, James Means, Miss Susan Minns, Miss Madeline Mixter, Miss Harriet J. Morse, Mrs. Susannah R. Norcross, Mrs. Elizabeth F. Parker, Miss M. B. Proctor, Miss Annette P. Rogers, Mrs. Robert Shaw Russell, Mrs. Berthold Schlesinger, Mrs. W. T. Sedgwick, Miss Emily Sever, Mrs. H. N. Slater, Henry G. Spaulding, Hon. C. F. Sprague, A Subscriber, Thursday Fine Arts Club, Edw. R. Tyler, Mrs. Elizabeth C. Ware, Miss Mary L. Ware, Henry C. Warren, Mrs. Susan E. Warren, Mrs. Henry M. Whitney, Miss M. P. Winsor.

4. PHOTOGRAPHS, ENGRAVINGS, ETC.

Baxter, Sylvester	10 Photographs.
Benson, Frank W.	7 “
Boston Numismatic Society	2 “
Brickbuilder Publishing Company	4 Plates.
Brown, Dr. Francis H.	2 Portraits.
Brown, S. N.	1 Photograph (framed).
Cartée, Miss Elizabeth F.	1 Engraving “
Chase, J. Eastman	29 Engravings.
Chicago Public Library	2 Photographs.
Clarke, Joseph H.	308 Engravings.
Coolidge, J. T., Jr.	15 Photographs.
Conant, William F.	1 Engraving (framed).
Crocker, Miss M. H.	1 Engraving (framed) and 1 Photograph.
Curtis & Cameron	5 Photographs.
Dewey, Mrs. M. W.	1 Photograph.
Doyle, Miss Agnes	1 “
Fleischner, Otto	8 Photographs.
Forbes, Mrs. John M.	80 “ (in 2 v.)
Foster, John R. and Stephen B.	24 “
Groton Public Library	1 Photograph.
Harvard University Astronomical Observatory	2 Photographs.

Lick Observatory	19 Photographs.
May, Henry A.	1 Photograph.
Monks, Dr. G. H.	189 Photographs and 52 Prints and Engravings.
Parker, Mrs. W. L.	6 Photographs.
Pickering Henry G.	21 “
Richards, William R.	10 “
Smith, Joseph L.	2 “
U. S. Department of War, En- gineers' Department	100 “
Whitney, James L.	23 “
Winther, Charles A. G.	1 Drawing.
Worcester Free Public Library	9 Photographs.

5. BOOKS, NEWSPAPERS AND PERIODICALS.

	Vols.	Nos.
Abbott, Dr. W. C., <i>Chicago, Ill.</i>		1
Academia Nacional de Medicina, <i>Lima, Peru</i>	1	
Académie Impériale des Sciences, <i>St. Petersburg, Russia</i>	1	
Academy of Science of St. Louis, <i>St. Louis, Mo.</i>		6
Actors' Fund of the U. S. of America, <i>New York City</i>		1
Adams Academy, <i>Quincy, Mass.</i>		1
Adams Nervine Asylum		1
Adler, Cyrus, <i>Washington, D.C.</i>		2
Aguilar Free Library, <i>New York City</i>		3
Alabama Agricultural Experiment Station, <i>Auburn, Ala.</i>		6
Alabama Geological Survey, <i>University, Ala.</i>	2	
Albany Medical College, <i>Albany, N.Y.</i>		1
Alden, William H., <i>Philadelphia, Pa.</i>	1	
Alexander, Mrs. Lucia G., <i>Florence, Italy</i>	2	
Alexander, Sigmund B.	2	
Allen, Edward G., <i>London, England</i>		1
Allen, Nathaniel F., <i>West Newton, Mass.</i>	1	
Allison, Dr. H. E., <i>Matteawan, N.Y.</i>		1
American Academy of Arts and Sciences	1	14
American Academy of Dramatic Arts, <i>New York City</i>		2
American Academy of Political and Social Science, <i>Phila- delphia, Pa.</i>		2
American Angler, <i>New York City</i>	1	
American Antiquarian Society, <i>Worcester, Mass.</i>		3
American Architect and Building News Co.		2
American Association for the Advancement of Science, <i>Salem, Mass.</i>	1	
American Baptist Home Mission Society, <i>New York City</i> , ...	2	23
American Baptist Missionary Union	2	
American Bar Association, <i>Philadelphia, Pa.</i>	3	
American Bible Society, <i>New York City</i>	3	1
American Board of Commissioners for Foreign Missions, ...		4
American Carpet & Upholstery Trades, <i>Philadelphia, Pa.</i>	1	
American Catholic Historical Society, <i>Philadelphia, Pa.</i>	8	1
American Citizen 1897-98 subscription		
American Climatological Association, <i>Philadelphia, Pa.</i>	1	
American Colonization Society, <i>Washington, D.C.</i>		3
American Congregational Association		1
American Federation of Labor, <i>Indianapolis, Ind.</i>		1
American Fisheries Society, <i>Glens Falls, N.Y.</i>	2	1
American Forestry Association, <i>Washington, D.C.</i>	2	6
American Homes Publishing Co., <i>Knoxville, Tenn.</i>	1	1
American Institute of Architects, <i>Providence, R.I.</i>	1	

	Vols.	Nos.
American Institute of Electrical Engineers, <i>New York City</i>		3
American Institute of Homœopathy, <i>New York City</i>	2	
American Institute of Mining Engineers, <i>New York City</i>	2	
American Iron and Steel Association, <i>Philadelphia, Pa.</i>	1	1
American Jewish Historical Society, <i>Washington, D.C.</i>		1
American Laryngological Association, <i>Washington, D.C.</i> , ...	1	
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Whiting, John L., & Son	1	
Whiting, Miss Lillian	7	
Whitney, Rev. E. W., <i>Milford, Mass.</i>	3	
Whitney, James L.	8	45
Whitney, Misses Sarah & Caroline	66	9
Whymper, Edward, <i>London, England</i>	1	
Wigan Free Public Library, <i>Wigan, England</i>	12	
Wight, C. H., <i>New York City</i>		1
Wilder, Prof. Burt G., <i>Ithaca, N.Y.</i>		1
Wilkes-Barré Times, <i>Wilkesbarre, Pa.</i>		
1897-98 subscription		
Williams, Dr. Charles H.		1
Williams, Francis H., <i>Philadelphia, Pa.</i>	1	
Williams, J. H., & Co., <i>Brooklyn, N.Y.</i>		6
Williams, Most Rev. John J.	29	
Williams, John L.		1
Willis, C. W.	1	
Willis, J. B.		2
Williston Seminary, <i>Easthampton, Mass.</i>		1
Wilmington Institute, <i>Wilmington, Del.</i>		1
Wilmington Institute Free Library, <i>Wilmington, Del.</i>		1
Wilson, Edward, <i>New York City</i>		1
Winchester, Mass., Town of	1	
Winchester Home Corporation for Aged Women		1
Windsor, Thomas, <i>Manchester, England</i>	2	
Winship, George P., <i>Providence, R.I.</i>		1
Winsor, Justin, <i>Cambridge, Mass.</i>		2
Winthrop, Robert C., Jr.	3	
Winthrop Public Library, <i>Winthrop, Mass.</i>	1	1
Wisconsin. Bureau of Labor & Industrial Statistics, <i>Madison</i>	1	
Wisconsin Agricultural Experiment Station, <i>Madison, Wis.</i>		4
Wisconsin Free Library Commission, <i>Milwaukee, Wis.</i>		2
Wisconsin State Historical Society, <i>Madison, Wis.</i>		4
Withington, Dr. Charles F.		1
Woburn, Mass., City of	7	
Woburn Public Library, <i>Woburn, Mass.</i>	2	2
Wolverhampton Free Library Committee, <i>Wolverhampton, England</i>		1
Woman's Charity Club		1
Woman's Medical College of Pennsylvania, <i>Philadelphia, Pa.</i>		3
Woman's Medical College of the New York Infirmary for Women and Children, <i>New York City</i>		2
Woman's Relief Corps, Department of Massachusetts	5	
—— National Convention, <i>Indianapolis, Ind.</i>	1	
Woman's Voice		
1897-98 subscription		
Woodbury, C. J. H.		1
Woodbury, Mrs. Josephine C.	2	
Woods, James H.	1	
Woodworth, J. B., <i>Cambridge, Mass.</i>	1	
Worcester, Rev. William L., <i>Philadelphia, Pa.</i>	1	
Worcester Academy, <i>Worcester, Mass.</i>		1
Worcester Free Public Library, <i>Worcester, Mass.</i>		
9 photographs		4

	Vols.	Nos.
Worcester Polytechnic Institute, <i>Worcester, Mass.</i> . . .		1
Wyman, Dr. Walter, <i>Washington, D.C.</i>		2
Wyoming Agricultural Experiment Station, <i>Laramie, Wy.</i>		1
Yale University, <i>New Haven, Conn.</i>	3	2
—— Library, <i>New Haven, Conn.</i>	1	
—— Observatory, <i>New Haven, Conn.</i>		1
Yearly Meeting of Friends, <i>Philadelphia, Pa.</i>		1
Young Churchman Co., <i>Milwaukee, Wis.</i>		2
Young Men's Christian Association, <i>New York City</i> . .		2
Young Men's Christian Associations of North America, <i>Springfield, Mass.</i>		1
Zadek, E. O., <i>Mobile, Ala.</i>	1	
Zoological Society of London, <i>London, England</i> . . .	1	
Zoological Society of Tokio, <i>Tokio, Japan</i>	1	2
Zürich, <i>Switzerland</i> , Stadtbibliothek Zürich		1

APPENDIX XIV.

ORDERS OF CITY COUNCIL.

The following are the orders passed by the City Government during the year ending January 31, 1898, which have been communicated to the Trustees as affecting the Library Department. (Mere items in appropriation bills are omitted, also various orders introduced but not actually passed.)

CITY OF BOSTON,
IN COMMON COUNCIL, February 4, 1897.

Ordered, That the Trustees of the Public Library of the City of Boston, through His Honor the Mayor, be requested to provide, so far as lies in their power, for the enlargement of the quarters now occupied by, and the extension of the service rendered through, the branch or delivery station of the Public Library now located on Broadway Extension, in Ward 7.

Passed. Sent up for concurrence.

IN BOARD OF ALDERMEN, February 8.

Concurred.

A true copy.

Attest :

(Signed)

JOHN T. PRIEST,
Assistant City Clerk.

CITY OF BOSTON,
IN COMMON COUNCIL, February 25, 1897.

Ordered, That the Trustees of the Public Library of the City of Boston, through His Honor the Mayor, be requested to establish a public reading-room in the vicinity of Dorchester station, in Ward 24.

IN COMMON COUNCIL, February 25, 1897.

Referred to His Honor the Mayor.

(Signed)

JOSEPH A. CONRY,
President.

CITY OF BOSTON,
IN COMMON COUNCIL, March 11, 1897.

Ordered, That the Trustees of the Public Library be requested to report, through His Honor the Mayor, to the Council at its

next meeting the estimated additional cost of opening the Central Library on Sundays and holidays throughout the year at 9 A.M.

IN COMMON COUNCIL, March 18, 1897.

Referred to His Honor the Mayor.

(Signed)

JOSEPH A. CONRY,

President.

Under date of March 26, 1897, the Trustees voted the following response to the above request:

Voted, That His Honor the Mayor be informed that while the entire additional cost of the undertaking proposed is difficult to comprehend in an estimate made in advance, such approximate estimate as the Trustees are able to give indicates that the cost would be something over \$7,000 per annum.

Order passed October 26, 1897, with reference to gift of William C. Todd, Esq. See *supra*, Appendix XII. Correspondence.



ANNUAL REPORT
OF THE
MARKET DEPARTMENT
FOR THE YEAR 1897.

CITY OF BOSTON,
OFFICE OF SUPERINTENDENT OF MARKETS,
May 20, 1898.

HON. JOSIAH QUINCY,
Mayor of the City of Boston :

DEAR SIR: In conformity to chapter 3, section 22, of the Revised Ordinances, I herewith submit the annual report of the Department of Markets for the year ending January 31, 1898.

The work of providing better drainage for the market building which was in progress at the date of the last report, has been completed, and the annoyance which has existed for many years has been removed. The benefit it has been hoped would result appears to be fully realized. A new sewer in South Market street, to take the place of one condemned several years ago, has been completed, and so far as drainage and sewerage of the market district is concerned, we are in good condition. The pavement on South and North Market streets, Faneuil Hall square and Commercial street, owing to its having been disturbed so frequently during the past four or five years, is in very bad condition and should at as early a day as possible be renewed with the same style of paving as has been laid in State street. The

market buildings are generally in good repair, and, with the exception of the porches at the easterly and westerly entrances of Faneuil Hall Market, which should be renewed, as well as some of the storm doors, only the ordinary repairs will be needed during the present year. I would suggest also the necessity of snow-guards being placed on the Faneuil Hall Market building, as during a heavy fall of snow there is danger from slides. The expense attending this work would be saved to the city in a short time, for, as matters are at present, we are obliged to have the snow removed from the roof after every storm. In addition to ordinary improvements made by the lessees of the markets, which are not only a saving of expense to the city, but a benefit to the market property, the lessees have, at an expense of over \$10,000, erected a permanent awning around the market to take the place of canvas awnings, which has not only added greatly to the comfort of those whose business or pleasure calls them to the market, but has been a great improvement to the property of the city.

During the year I have condemned and destroyed, as being unfit for food, 2,313 pounds poultry, 217 pounds ducks, 580 pounds beef, 120 pounds lamb, 180 pounds veal, besides large quantities of fruit and vegetables which have been sent to the dumping-scow.

The police detailed for duty at the market have made sixty-two arrests and convictions for the following offences, viz.: Larceny, twenty-eight; drunkenness, twenty-four; refusing to move team, three; larceny of team and contents (recovered), two; selling tainted poultry, two; embezzlement, obtaining goods under false pretence, and non-support of family, one each. The appropriation for the Market Department for the year ending January 31, 1898, was \$8,000. An additional appropriation of \$615.07 was required to provide for work which unexpectedly was obliged to be done, making the total expense for the department \$8,615.07 and was expended as follows:

Salary of Superintendent of Markets	\$3,000 00
Salary of Deputy Superintendent and Weigher at Scales	1,433 32
Salary of one watchman	1,000 00
Salary of one messenger	900 00
Amount paid for extra police for vacations and holidays	149 26
<i>Carried forward</i>	<u>\$6,482 58</u>

<i>Brought forward</i>	\$6,482 58
Amount paid for gas and electric light	719 50
Amount paid for miscellaneous supplies	1,412 99
Total appropriation	<u>\$8,615 07</u>

The income from the Department of Markets for the year ending January 31, 1898, has been as follows :

For rent of stalls and cellars in Faneuil Hall	
Market	\$65,347 00
From rent of stalls and cellars in new Faneuil Hall	
Hall Market	18,223 80
From rent of outside stands	1,407 00
From weighing fees at city scales	611 55
Total	<u>\$85,589 35</u>

The property in the department belonging to the city is :
Electric light wirings and fittings in Faneuil Hall

Markets, cost	\$1,672 00
One Morris safe	150 00
One Howard watch clock	200 00
One Howard watch clock	50 00
Two roll-top desks and one roll-case	125 00
Two clothes-presses	30 00
Scales, weights, etc.	125 00
Bookcase, carpets, stoves, chairs and small supplies	100 00
Total	<u>\$2,452 00</u>

Respectfully submitted,

GEORGE E. MCKAY,
Superintendent.



ANNUAL REPORT
OF THE
OVERSEEING OF THE POOR DEPARTMENT,
FOR THE
YEAR ENDING JANUARY 31, 1898.

BOSTON, February 1, 1898.

HON. JOSIAH QUINCY,

Mayor of the City of Boston :

SIR: The Board of Overseers of the Poor herewith present their thirty-fourth annual report of the present series, covering the year from February 1, 1897, to January 31, 1898.

EXPENSE OF THE DEPARTMENT.

Our drafts upon the city treasury during the year ending January 31, 1898, amounted to	\$133,898 49
Sundry receipts paid over to city collector	17,176 30
Leaving the net charge to the city for the de- partment for the year	<u>\$116,722 19</u>

Amount collected by us for care in City Hospital of State paupers, and those belonging elsewhere than in Boston, and paid over to the trustees of the City Hospital . . . \$43,428 46

STATISTICS OF CASES AIDED.

The number of families assisted by us in the year was 3,398, an increase of 45 families from the previous year. Of these, 322 families resided in other cities and towns, but had retained their settlement in this city; and we received payment for aid rendered to 249 families residing in Boston, whose legal settlement was elsewhere.

The number of new cases aided during the year was 832, an increase of 67 over the year previous. The total number of cases dealt with since 1864, is 33,864.

The number of official visits made by our visitors during the year, was 18,599. In addition, 821 visits were made by two physicians in our employ.

FAMILIES AIDED DURING THE YEAR ENDING JANUARY 31, 1898.

- 1,810 having settlements here, aided directly from this office, or by agents in the outlying districts.
- 322 having settlements here, aided in other cities and towns, through the overseers of the poor of those places.
- 406 families, of which the man is unsettled, the wife and children having a settlement here.
- 249 residing here, having settlements in other cities and towns, which refund amount of relief granted.
- 449 unsettled cases aided on account of the State.
- 162 non-settlement cases, temporarily aided.

3,398 families, representing about 10,194 persons.

NUMBER OF FAMILIES AIDED IN EACH MONTH OF THE PAST TWO YEARS.

1896. Feb.,	1,758 families.	1896	Sept.,	1,045 families.
March,	1,688 "		Oct.,	1,167 "
April,	1,208 "		Nov.,	1,159 "
May,	1,065 "		Dec.,	1,600 "
June,	1,046 "	1897.	Jan.,	1,842 "
July,	1,093 "		Feb.,	1,761 "
Aug.,	995 "		March,	1,716 "

1897.	April,	1,242 families.	1897.	Sept.,	1,084 families.
	May,	1,107 "		Oct.,	1,098 "
	June,	1,030 "		Nov.,	1,190 "
	July,	1,108 "		Dec.,	1,568 "
	Aug.,	1,027 "	1898.	Jan.,	1,796 "

DISTRICTS.	Number of Families aided.	Amount of Aid given.	Population by Census of 1890.
East Boston	187	\$2,925 42	36,930
Charlestown	427	8,305 48	38,348
City Proper	1,055	21,742 49	149,449
South Boston	461	10,617 63	66,791
Roxbury	698	19,736 67	90,292
Dorchester	82	2,570 87	29,638
West Roxbury	68	3,285 58	24,997
Brighton	70	1,672 11	12,032
Living out of city but aided from this office	28	1,382 75	
Living out of city and aided through officers of other cities and towns	322	13,072 68	
Totals	3,398	\$85,311 68	448,477

To the sum of \$85,311.68, given directly to the poor, should be added the sum of \$3,839.47, paid for burials, the sum of \$5,744.46 paid for support of the Temporary Home, and the further sum of \$8,427.06 paid for support of the Lodge for Wayfarers; making a total of \$103,322.67 actually paid out by the Overseers of the Poor from the tax levy for the direct relief of the poor. We have also disbursed as trustees the further sum of \$31,084.66 to the various pensioners and beneficiaries adjudged worthy and falling within the provisions of the trusts.

THE WORK TEST.

The Board has continued to demand work of all able-bodied male applicants in return for groceries and coal furnished their families.

	1895.	1896.	1897.
Number of men who worked for aid given	580	525	593
Number of days work actually performed	3,583	3,395	4,604
Number of men receiving work-cards who did not present them for work	107	108	102

TEMPORARY HOME FOR WOMEN AND CHILDREN.

Record of Women Admitted to the Home in 1897.

	483 new cases, or women who had not been in Home pre- vious to 1897.		582 old cases, or women who had been in Home previous to 1897.				Totals.
	Came once only.	Came more than once.	Came also in 1896.	Came also in 1895 and 1896.	Came also in 1894, 1895 and 1896.	Came occa- sionally in previous years.	
Known to have been in prison and alms- house	Record not known.	1	20	14	50	33	118
Known to have been in prison only.....		2	11	5	9	28	55
Known to have been in almshouse only..		19	30	12	43	80	184
Not known to have been in prison or almshouse		68	54	25	48	120	315
Totals.....	393	90	115	56	150	261	1,065

667 women admitted once only, or 667 times.

398 women admitted 1,130 times.

182 places secured at domestic service by Industrial Aid Society.

178 places secured at domestic service by Temporary Home.

764 children admitted 793 times.

Of whom 297 came with mothers.

“ “ 59 were lost children.

“ “ 14 were foundlings.

“ “ 113 came in various ways.

“ “ 225 were sent by the State.

“ “ 56 by Soc. for P. of C. to Children.

3,161 meals given to 1,419 women (319 of whom had been inmates) and 73 children, in outside relief.

17 of these women had over 25 meals each.

70 “ “ “ “ from 10 to 25 meals each.

1,332 of these women had from 1 to 10 meals each.

This Home is a Wayfarers' Lodge for women and children.

By comparing the record cards of the last five years we find a gradual decrease in the number of its women inmates.

In 1893 there were 1,395 different women who came to the house 2,982 times, while this year there have been but 1,065 different women who came 1,797 times.

A closer study of details shows that each year this whole number falls quite clearly into two groups; those who have never been admitted before, whom we call the "new" inmates, and the somewhat larger group of "old" inmates, well known to us, because they have been more or less frequently admitted in previous years.

The above table illustrates this statement, and also indicates the general character of the women who drift into a free city home, and their tendency to return to it.

A large proportion of our inmates are wanderers without permanent homes of their own, and are drinkers or habitual drunkards, and many are known to have been in prison or almshouse, or both. Drink is their besetting sin, and though many are good-tempered women and excellent workers, their strength is not sufficient to enable them to resist temptation, and for this reason they are never permanently settled anywhere, but drift from place to place, and often come back to the Home many times each year. Those who return most frequently are generally well known also at some city or state prison or almshouse, and when they drop out of the Home for a long period we often find that they have passed the time in one or more of those institutions.

It is impossible to gain much influence over such women during a temporary stay in a place where no authority exists except to enforce the rules of the house; but it is our effort to understand sufficiently their history and character, to do something to meet special needs, and to start them on their way by advice and suggestion, or by securing the protection of friends or institutions. Much can be done for the "new" women (of whom there have been 393 this year), who use the Home as a refuge for a few days only, and among whom are many who have missed their way, or lost their money, or are in search of employment or friends.

Such work requires knowledge of and co-operation with other agencies, both public and private, and our matron has this year consulted and gained help from the Associated Charities, the St. Vincent de Paul Society, the Children's Aid Society, the Trustees for Children, the Pauper Institutions Department, the Dedham Home, the North End Mission, the Salvation Army, the Meonah Home, the Society for the Prevention of Cruelty to Children, the State Board, etc. Our agent visits the House of Detention every morning, and often sees the woman probation agent in regard to special

women, and we are in frequent communication with the Police Department. The Industrial Aid Society has given most efficient and constant help in finding places at service.

The results of this kind of work may perhaps be most easily suggested by the following cases :

A most respectable woman of sixty, without friends, too sick to work, came for a dinner. We kept her, sent for a doctor and got her into the City Hospital, where she died.

A young girl, alone in the city, was brought from an employment office. She told many improbable stories, which afterward proved to be false, as to her friends and relatives, her reason for being in the city, etc. We at length discovered her home in another city and sent her to it, and a responsible person was asked to look after her there.

A young woman, ill and in great trouble, threatened to commit suicide. She stayed with us a short time, and at length found an asylum in the Dedham Home.

A woman and her husband, hearing that plenty of work was to be had in Boston, walked from a country town some forty miles away. Their feet were swollen and blistered. The man was sent to the Lodge, the woman stayed with us and worked hard and willingly, anxious to pay for her lodging. Inquiry at their home proved the truth of their story, and a place was found for them by the Associated Charities on a farm, where both secured work.

An unmarried girl, with two children, whose mother was greatly distressed about her future welfare, was, after much consultation with her mother, induced to go willingly to the Salvation Army Home. Great interest is taken in her there, and she is very contented.

A young woman who had been in Sherborn prison was at length induced to go the House of the Good Shepherd.

A girl of twenty, out of work and discouraged, was tried in two places, and is now doing well in a family, at three dollars per week.

A very attractive young girl had lost her way. She spoke a dialect no one could understand, but after much difficulty the address of her brother was found, and she was received into his comfortable home in a neighboring town.

Our statistics show that 764 children have been admitted. Those brought by the State or private societies were generally taken away by them as usual. Foundlings were provided for at once by the State, and lost children were returned to their homes, through the agency of the police. Those who come with their mothers usually leave with them. Our nursery department contains on an average about six

children per day, but rarely the same children for two days in succession. The ages range from babies to grown girls, and the length of stay varies from a few hours to several weeks. It can be seen, therefore, that these conditions do not easily admit of the introduction of kindergarten or other training.

The house has lately been completely renovated with paint and whitewash, for which there has long been urgent need.

In July our matron, Mrs. Parsons, resigned, and we secured in Miss Sarah R. Berry a person who already possessed much experience for the position which she is now filling most satisfactorily.

We shall continue to work the coming year on the lines here indicated, and hope to make an advance by co-operating more effectually with other organizations, and especially with the Board of Trustees of Pauper Institutions, whose work is so closely connected with our own.

STATISTICS OF THE WAYFARERS' LODGE.

	1896.	1897.		1896.	1897.
Total number of meals furnished during the year	48,785	54,420			
Total number of lodgers during the year,	21,240	21,772			
The birthplaces of these lodgers were as follows :					
America	9,739	10,901			
Ireland	6,053	5,850			
England	1,895	1,453			
British Provinces	1,366	1,404			
Scotland	823	777			
Other countries	1,364	1,387			
	21,240	21,772			
Meals.	1896.	1897.	Lodgers.	1896.	1897.
February	5,029	5,396	February	1,893	2,096
March	5,124	6,419	March	2,061	2,492
April	4,038	5,398	April	1,826	2,609
May	3,441	4,373	May	1,569	1,937
June	3,277	4,052	June	1,454	1,682
July	3,343	3,525	July	1,315	1,354
August	3,210	3,430	August	1,228	1,310
September	3,466	3,358	September	1,649	1,328
October	4,297	3,994	October	2,082	1,666
November	4,218	3,879	November	2,087	1,614
December	4,622	4,765	December	2,138	1,863
January	4,720	5,831	January	1,938	1,821

Number of tramps cared for over night —

In 1892 was	.	.	.	.	.	.	32,803
" 1893 "	.	.	.	.	.	.	33,416
" 1894 "	.	.	.	.	.	.	32,815
" 1895 "	.	.	.	.	.	.	24,408
" 1896 "	.	.	.	.	.	.	21,240
" 1897 "	.	.	.	.	.	.	21,772

WAYFARERS' LODGE AND WOOD YARD.

The sale of the premises occupied by us for many years as a wharf for the receipt and storage of wood necessitated hiring a new wharf. One was secured at East Cambridge, which answers our purposes very well, although much smaller than the old wharf. The number of tramps lodged during the year increased slightly over the previous year. This marks the end of the steady decrease in numbers which has been constant from 1894 to the present year. It would seem as if we might reasonably expect to receive about 22,000 tramps each year under normal conditions.

The character of the applicants for lodgings has perceptibly improved during the last few years, but the unwillingness to work and the lack of any special calling or trade are still almost universal. A special and earnest effort was made by the Industrial Aid Society to co-operate with us by securing places for those of our lodgers who were willing to work. A man was detailed by that Society for some weeks who talked with the men daily and nightly, and gave application cards to all whom he thought in the least promising, to be presented by them when applying for positions at the Society's office. But few took the trouble to go to the office with the cards, and the results were on the whole discouraging.

A system of registration of the men applying for meals has recently been instituted in the hope of acquiring additional and valuable information for possible future action.

The attendance of a policeman at the desk of the night clerk where applicants for lodging must register has been discontinued. The rule requiring a card from a police station or other source has been abolished. The unwritten law limiting the time of residence to three days has also been given up. All these changes are in the line of increasing the usefulness of the Lodge to the community. It stands ready to receive all comers whose poverty is such as to prevent them from paying for their night's lodging. The citizen may rest assured that the tramp who asks for money with which to get food or lodging will be fed and lodged without

money and without doubt, if sent to the Lodge on Hawkins street.

REPAIRS AND IMPROVEMENTS.

The storehouse where our groceries are kept and from which our deliveries are made has been put in thorough repair; and some much-needed improvements have also been made during the year, new drainage and plumbing and new ventilators having been put in.

Our main office building has also been very much improved and thoroughly cleaned and put in repair. The plumbing has all been completely overhauled and a great deal of new work done, and an immense amount of new drainage work has been put in. New skylights in the roof, new floors in some of the rooms, and fresh paint and whitewash have made a most agreeable change in the appearance of the building.

The expense of these alterations, especially of the drains and plumbing, was so great as to swell the total of our expenses to an unusually large sum, but we trust the thorough manner in which the work has been accomplished will prevent the need of similar expenditures for a long time to come.

RESIGNATION OF MEMBERS.

During the year we have lost the services of two valuable members by resignation. Mr. John Lamb resigned early in the year after a service of nearly six years, on account of private business reasons; and Mr. Charles Logue resigned in January to accept the position of head of the new Repairs Department of the city of Boston.

DEATH OF MR. KILLION.

In the death of Mr. Michael J. Killion the Board loses the services of one of the most efficient and valuable members of its staff. He served us for many years in a most admirable manner, performing the duties of a visitor carefully and conscientiously. He was kind-hearted and considerate to the poor in a marked degree. His capacity for work was unusual. His memory of his cases and of all the details about the various families under his charge was most remarkable. The Board passed resolutions appropriate to his memory and a delegation attended his funeral.

QUARTERLY CONFERENCES.

Under the law of 1897, separating the various city institutions and establishing unpaid boards of trustees for their

control, provision was made for quarterly meetings or conferences between delegates from these various boards and the Institutions Commissioner and our own Board. These have been regularly held and our Board has been represented by delegates. It is hoped that much good may result from them. The co-operation between these boards and our own is now very close. Both the Temporary Home and the Lodge for Wayfarers receive inmates at the request of the Trustees of Pauper Institutions and keep them for a longer or shorter time, as may be thought wise by the Trustees.

TRUST FUNDS.

The total amount of the trust funds in our charge as a corporation is now \$716,860.47, an increase during the last year of \$2,252.50.

The number of pensioners now aided from the Pemberton, the Boylston Relief, the David Sears Charity, the Moses Hunt, and the Goodnow Funds is two hundred and ninety-one, seven more than on February 1, 1897. During the year thirteen have died, one has gone to a home, four have become self-supporting, three have withdrawn, and one has been transferred to the city list. Twenty-nine new names have been added.

We have paid during the year from the Boylston Education Fund \$6,260.60 for the board of children, conformably to the terms of that trust.

For details of the various trust funds held by us, and receipts and expenditures since February 1, 1897, see the tabulated statement herewith submitted. Extracts from the wills establishing these trusts will also be found at the end of this report.

FINANCIAL STATISTICS.

Reports of the secretary and treasurer are herewith appended. These show all receipts and expenditures during the last twelve months, so arranged that the expenses of the several branches of our work can be readily ascertained. A schedule of the personal property in our hands February 1, 1898, is also annexed.

Respectfully submitted,

In behalf of the Overseers of the Poor,

WILLIAM P. FOWLER,

Chairman.

NOTE. — In accordance with the practice of recent years, we had an expert accountant to examine the books and accounts of the Board at the close of the financial year. His report is appended at foot of page 14.

FINANCIAL REPORT.

Statement of receipts and expenditures for the year ending January 31, 1898 :

RECEIPTS.

Cash on hand February 1, 1897,	\$2,277 39	
Drafts on City Treasurer, and requisitions for Temporary Home and Wayfarers' Lodge,	133,898 49	
Cash from cities and towns .	6,135 78	
Cash from occupants of Charity Building, for heating . . .	1,102 72	
Cash from Commonwealth, for relief	6,854 32	
Cash from State and other sources, for burials	2,357 94	
Aid returned by paupers . . .	84 83	
Cash from sundry persons, for board in Temporary Home .	266 87	
Receipts on account of aid in City Hospital:		
Cities and towns, \$8,629 00		
State of Massa- chusetts	34,916 46	
		43,545 46
Cash from estate of James Williams	200 00	
Receipts from State of Massa- chusetts, for account of Car- ney Hospital cases	1,481 47	
Receipts from sale of old barrels, etc., by the Supply Depart- ment	358 84	
		<u>\$198,564 11</u>

EXPENDITURES.

Amount paid for burials . . .	\$3,839 47
Amount paid cities and towns, for relief of Boston poor . . .	13,072 68
Amount paid expenses Temporary Home	5,744 46
Amount paid expenses Lodge for Wayfarers	8,427 06
Amount paid pensions and grants at office	22,340 36
Amount cash paid for immediate relief of persons having no settlement	350 55
Amount paid for fuel (1,211 tons of coal and 27 cords and $\frac{1}{2}$ foot of wood)	7,840 28
Amount paid for groceries and expense of delivery	35,298 69
Amount paid salaries of treas- urer and secretary	4,500 00
Amount paid salaries of book- keeper and clerks	5,300 00
Amount paid salaries of visitors and agents	13,533 33
Amount paid office expenses	911 24
Amount paid transportation	801 49
Amount paid Charity Building expenses 5,717 21	
Extra for plumbing, ... 3,475 00	
Extra for painting 295 00	
	9,487 21
Amount paid medical attend- ance and medicine	1,657 76
Amount paid Institutions Com- missioner from estate of James Williams	200 00
	\$133,304 58
Cash paid City Hospital	43,428 46
Cash paid City Collector	17,176 30
Cash paid Carney Hospital, as received from Common- wealth	1,481 47
Cash balance, January 31, 1898,	3,173 30
	\$198,564 11

PAYMENTS TO THE CITY COLLECTOR DURING THE YEAR.

Receipts from occupants of Charity Building	
for heating during the year	\$1,102 72
Receipts from cities and towns	6,150 78
Receipts from the State for burials	2,053 81
Receipts from the State for relief of sick and	
wife-settlement cases	3,333 39
Receipts from the State for temporary aid . .	3,520 93
Receipts for sundry burials	304 13
Receipts from paupers, aid refunded by them .	84 83
Receipts for account Temporary Home, board	
of women and children	266 87
Receipts from sale of barrels by Supply De-	
partment	358 84
	\$17,176 30

EXPENDITURES ON ACCOUNT OF LODGE FOR WAYFARERS.

Salaries	\$3,684 68
Groceries and provisions	2,862 08
Furnishing goods, bedding and furniture . .	310 21
Fuel, 118½ tons coal, 10 cords wood	594 35
Gas and electric lighting	480 83
Repairs, etc.	95 26
Stationery and printing	59 50
Water-rates	267 00
Sundries	67 15
Medical attendance	6 00
	\$8,427 06

EXPENDITURES ON ACCOUNT OF CHARITY BUILDING.

Fuel, 300 tons coal	\$1,315 00
Engineer's salary	1,800 00
Janitor's salary	1,094 27
Disinfectants	32 40
Gas and electric lighting	253 49
Extermination of water-bugs	100 00
Water-rates	92 00
Sundries	10 53
Extra labor in boiler-house	300 00
Repairs and new gas fixtures	182 43
New plumbing for building	3,475 00
Cleaning	391 98

Carried forward,

\$9,047 10

<i>Brought forward,</i>	\$9,047 10
Painting	295 00
Furnishing	145 11
	\$9,487 21
Deduct estimated cost of heating the Temporary Home, included in the above . .	\$1,503 17
Also amount received from occupants	1,102 72
	2,605 89
Net cost	<u>\$6,881 32</u>

EXPENDITURES FOR CITY TEMPORARY HOME.

Groceries, provisions, etc.	\$1,663 50
Salaries	2,040 99
Fuel, 25 tons coal, 5 cords wood	176 70
Gas and electric lighting	133 17
Water-rates	310 90
Medical attendance and medicine	56 80
Confinement cases	740 00
Furniture and household goods	265 90
Repairs	217 94
Sundries	93 09
Stationery	16 23
Telephone	29 24
	\$5,744 46
Estimated cost of heating, included in Charity Building expenditures	1,503 17
	\$7,247 63
Deduct receipts for board and medical relief of sundry persons	266 87
Net cost	<u>\$6,980 76</u>

BOSTON, March 24, 1898.

WILLIAM P. FOWLER, Esq.

Chairman, Overseers of the Poor:

SIR: This is to certify that I have made a careful examination of the books and accounts of the Overseers of the Poor, and those relating to the trust funds and income thereof, for the year ending January 31, 1898, and find them clear and correct.

All receipts of money were deposited in banks, all payments vouched, and the two sets of books exactly balance.

Faithfully,

GEO. T. STODDARD, Auditor.

Statement of Trust Funds in the Hands of the Overseers of the Poor, F. W. Lincoln, Treasurer, January 31, 1898.

INVESTMENTS.	Pemberton or General Fund.	Boylston Education Fund.	Boylston Relief Fund	Mason Fund.	Dexter Fund.	Jeffries Fund.	Lucy Bullman Charity.	David Sears Charity..	Pierce Fuel Fund.	Holton Protestant Pauper Fund.	Holton Protestant Poor Fund.	Stoughton Poor Fund.	Goodnow Fund.	Rachel T. Stevens Fund.	Moses Hunt Fund for the Destitute.	Total.															
United States four per cent. Treasury Bds.				6	\$7,300 00											\$7,300 00															
City of Boston Currency Notes.....	34	\$110,000 00	45	\$137,500 00	20	\$26,250 00	1	1,000 00	7	\$4,750 00	10	\$6,000 00	28	\$22,750 00	41	\$237,500 00	1	\$1,500 00	5	\$3,750 00	1	\$1,500 00	5	\$2,750 00	7	\$7,250 00	3	\$3,000 00	2	\$10,500 00	596,000 00
Fifty Associates' Corporation Stock.....								19	22,800 00																					22,800 00	
Real Estate.....								48,066 32																			2,200 00			50,266 32	
Columbian National Bank Stock.....		60	6,000 00																											6,000 00	
New England " " "	50	5,000 00																												5,000 00	
North " " "	9	882 00	16	1,608 00																										2,490 00	
State " " "	60	6,000 00																												6,000 00	
Tremont " " "	23	2,300 00	6	600 00																										2,900 00	
Union " " "	32	3,200 00			28	2,800 00																									6,000 00
Washington " " "	60	6,000 00																												6,000 00	
Swamscot Machine Company	9	450 00																												450 00	
Investments.....		\$133,832 00		\$145,708 00		\$29,050 00		\$8,300 00		\$4,750 00		\$6,000 00		\$22,750 00		\$328,366 32		\$1,500 00		\$3,750 00		\$1,500 00		\$2,750 00		\$7,250 00		\$5,200 00		\$10,500 00	\$711,206 32
Cash.....		1,660 02		1,380 73		1,365 66		203 86		469 34		465 86		130 79				46 16		446 17				70 12		478 10			555 42	5,654 15	
Cash Overdrawn																1,618 08															
Total		\$135,492 02		\$147,088 73		\$30,415 66		\$8,503 86		\$5,219 34		\$6,465 86		\$22,880 79		\$326,748 24		\$1,546 16		\$4,196 17		\$1,500 00		\$2,820 12		\$7,728 10		\$5,200 00		\$11,055 42	\$716,860 47
Total, January 31, 1897.....																															714,607 97
Increase.....																															\$2,252 50

Boston, January 31, 1898.

FREDERIC W. LINCOLN,
Treasurer.

TRUST FUND.—Cash Accounts, February 1, 1897, to January 31, 1898.

	PEMBERTON FUND.		BOSTON EDUCATION FUND.		BOSTON RELIEF FUND.		MASON FUND.		DEXTER FUND.		JEFFRIES FUND.		LUCY BULLMAN CHARITY.		THE DAVID SEARS CHARITY.		PIERCE FUEL FUND.		HOLTON PROTESTANT PAUPER FUND.		HOLTON PROTESTANT POOR FUND.		STOUGHTON POOR FUND.		GOODNOW FUND.		RACHEL T. STEVENS FUND.		MOSES HUNT FUND FOR THE DESTITUTE.		TOTAL.		
	Receipts.	Payments.	Receipts.	Payments.	Receipts.	Payments.	Receipts.	Payments.	Receipts.	Payments.	Receipts.	Payments.	Receipts.	Payments.	Receipts.	Payments.	Receipts.	Payments.	Receipts.	Payments.	Receipts.	Payments.	Receipts.	Payments.	Receipts.	Payments.	Receipts.	Payments.	Receipts.	Payments.	Receipts.	Payments.	
Cash, January 31, 1897.....	\$1,462 29		\$521 80		\$1,347 51		\$205 57		\$321 65		\$710 97		\$1,113 23		\$1,908 74		\$138 30		\$301 32		\$72 54		\$459 89		\$378 05				\$277 27		\$5,401 65		
RECEIPTS.																																	
Bank Dividends, including Tax Refunded } by the State.....	1,502 45		422 88		213 04																										2,138 37		
Interest on City Notes.....	4,605 00		6,687 50		1,110 00		40 00		188 75		248 75		887 50		\$10,830 00		90 00		170 00		75 00		107 50		290 00		\$120 00		420 00		25,870 00		
City Notes paid.....	1,000 00		5,000 00		5,000 00								1,000 00		7,000 00																19,000 00		
Interest on United States Bonds.....							292 00																							292 00			
Interest on Deposits.....	15 28		9 15		20 11		3 92		9 44		6 14		14 52		1 50		2 88		9 34		1 85		2 73		10 05				8 15		115 06		
Rents.....													1,633 54		1,309 16												100 00				3,042 70		
Dividends on Fifty Associates' Stock.....															2,280 00																2,280 00		
PAYMENTS.																																	
City Notes.....		\$1,000 00		\$5,000 00		\$3,000 00					\$500 00		\$2,000 00		7,000 00								\$500 00								\$21,000 00		
Pensions.....		5,925 00				1,325 00									14,130 00										\$200 00				\$150 00		21,730 00		
Board of Boys at Farm School.....				2,020 40																											2,020 40		
Board of Boys at the House of the Angel Guardian.....				1,210 28																											1,210 28		
Board of Boys and Girls, Children's Aid Society.....				997 93																											997 93		
Board of 1 Boy at Working Boys' Home.....				145 14																											145 14		
Board of Girls at St. Vincent's Asylum.....				1,574 35																											1,574 35		
Board of 1 Girl at Mt. St. Joseph Academy.....				208 00																											208 00		
Board of 1 Boy.....				104 50																											104 50		
Paid on account of salary of the Chaplain of the House of Industry.....							\$337 63																								337 63		
Grants.....													2,518 00																		2,518 00		
Paid for turkeys for Brighton Poor.....																			\$34 49		\$149 39										183 88		
Paid Beneficiary.....																											\$156 66					156 66	
Paid Treasurer of Charlestown Poor Fund.....																		\$185 02													185 02		
Paid Tax on Real Estate in Somerville.....																													63 34			63 34	
Coal.....										\$50 50																						50 50	
Cash, January 31, 1898.....		1,660 02		1,380 78		1,365 66		203 86		469 34		465 86		130 79				46 16		446 17				70 12		478 10			555 42		5,654 15		
Cash overdrawn.....															1,618 08																		
Total.....	\$8,585 02	\$8,585 02	\$12,641 33	\$12,641 33	\$7,690 66	\$7,690 66	\$341 49	\$341 49	\$519 84	\$519 84	\$965 86	\$965 86	\$4,648 79	\$4,648 79	\$23,038 74	\$23,038 74	\$231 18	\$231 18	\$480 66	\$480 66	\$149 39	\$149 39	\$570 12	\$570 12	\$678 10	\$678 10	\$220 00	\$220 00	\$705 42	\$705 42	\$58,131 78	\$58,131 78	

E. E. Boston, January 31, 1898.

FREDERIC W. LINCOLN, Treasurer.

TRUST FUNDS IN THE HANDS OF THE OVERSEERS OF THE POOR.

Pemberton Fund. — This fund comprises bequests and gifts made to the city of Boston from 1760 to the present time from "A. B.," Daniel Oliver, Margaret Blackader, Alice Quick, Anne Wheelright, Mary Ireland, Benjamin Pemberton, Martha Stevens, Mrs. H. Driscoll, William Breed, Samuel Eliot, John Coffin Jones, Mary Belknap, "A Citizen of Boston," Anonymous, Miss Dr. Harriot K. Hunt, George Higginson, Walter E. Hawes, and William B. Spooner. The most important, however, of the bequests was from Benjamin Pemberton, Esq., whose will was proved June 25, 1782, and for that reason his name has been given to the fund. The income of this fund is to be expended, at the discretion of the Overseers, in semi-annual payments to the poor of the city.

Boylston Relief and Education Funds. — These funds were from a bequest by John Boylston, who died in London, England. His will was proved June 12, 1795. One portion of the bequest is ordered to be paid to "poor and decayed householders of the town of Boston not under fifty years of age; persons of good character, and reduced by the acts of Providence, not by indolence, extravagance, or other vice." The other portion to be applied to the "nurture and instruction of poor orphans and deserted children of the town of Boston until fourteen years of age."

Mason Fund. — A bequest from Jonathan Mason, by will dated July 15, 1798, interest to be paid annually "to the standing chaplain of the almshouse and workhouse, or by whatever other name called"; interest to be added until one is appointed. The interest is now paid semi-annually towards the salary of the chaplain of the House of Industry.

Dexter Fund. — A bequest from Samuel Dexter, by will dated May 7, 1811, "for supplying with firewood or coal such poor persons, objects of charity, as are not supported in the almshouse, though sometimes relieved by the Overseers of the Poor."

Jeffries Fund. — A bequest by David Jeffries, former Town Treasurer. Will dated January, 1786: "Income to be applied to the purchase of tea, coffee, chocolate, and sugar, for the refreshment of those persons who, in the

providence of God, are or shall be reduced and obliged to take shelter in the almshouse, after having lived reputably; the Overseers of the Poor to be the judges as to the persons, but always giving the preference to the pious poor."

Lucy Bullman Charity consists of an estate on Cambridge and Joy streets, in this city, which came into the possession of the city of Boston, in accordance with the will of Lucy Bullman, proved at Probate Court, Suffolk County, January 9, 1832, in which it is provided that, upon the death of certain persons therein named, said estate is given to the city of Boston, upon the condition that the estate should never be sold, but the income used for the benefit of the poor. By a vote of the City Council, approved by the Mayor, January 4, 1873, this estate was placed in charge of the Overseers of the Poor.

The David Sears Charity is a fund contributed by the late Hon. David Sears for the relief of the poor, the income only to be expended "in aid and for the support of citizens or families who may have seen better days, and for charity in all its forms, in such a manner as may best tend to alleviate the sufferings of human life and render the condition of the poor more comfortable.

Pierce Fuel Fund.—The legacy of Caleb Pierce to the city of Charlestown, accepted by the City Council of that city, May, 1861: "Income to be expended in the purchase of fuel, to be distributed to those indigent widows whose husbands, before their decease, had resided in Charlestown at least one year, and the said widows still continuing to reside in Charlestown at the time of receiving said bounty. Income payable annually to the Trustees of the Charlestown Poor Fund."

Holton Protestant Poor Fund.—A bequest by James Holton to the inhabitants of the town of Brighton: "Income to be annually expended forever in purchasing and distributing provisions among poor and indigent Protestant families in said town of Brighton, on Thanksgiving or other holidays, or just previous to such holidays, to the end that such poor Protestant families may have the means, in some degree, of enjoying such holidays in common with their fellow-citizens; and I specially direct that in such periodical distributions unmarried Protestant females who are poor or needy shall receive a liberal share of provisions, and also other articles of comfort, such as such distributors shall deem to be the most conducive to the comfort and happiness of that lone class of citizens."

Holton Protestant Pauper Fund.—A bequest by James Holton to the inhabitants of the town of Brighton: "Income to be annually expended, in whole or in part, as necessity or circumstances may require, by the Selectmen of said town, in providing good and plentiful meals on Thanksgiving day or other holidays, to the Protestant paupers of said Brighton." Unexpended income to be added to the principal.

Stoughton Poor Fund.—A bequest of Lieut.-Gov. William Stoughton, who died July 7, 1701. By his will he gave £50 to the relief of the poor of Dorchester, to be improved by the care of the Selectmen, the income to be distributed to the most needy inhabitants.

Goodnow Fund.—A bequest of Elisha Goodnow (to be paid over upon the decease of his wife) to the city of Boston and its assigns, "to be invested and the income applied forever to and for the relief, assistance and support of the poor, sick, and infirm in said city, not supported by the said city in its almshouse, in such manner as the said city, or the government or officers thereof, may deem most judicious, but without reference to the religious faith or belief of those who may apply for or need the assistance from this fund." \$5,000, received April 29, 1885.

Rachel T. Stevens Fund.—A bequest of Rachel T. Stevens, the net income to be paid (after the death of a person named in the will) "for the support and maintenance of poor, worthy Protestant single women of Boston, who have arrived at the age of fifty years (not including widows), paying to each of such women during her life the sum of one hundred dollars, in semi-annual payments. Upon the marriage of any beneficiary under this will no further payment of money is to be made to her, nor is any further payment of income to be made to any beneficiary who becomes unworthy of help under this trust."

Moses Hunt Fund for the Destitute.—"The income to be devoted to the relief and welfare of Protestant destitute residents of that part of said Boston which was Charlestown." \$10,000, received March 7, 1889, has been invested in a city of Boston note.

OVERSEERS OF THE POOR, 1897-98.

[One-third of the Board is appointed annually by the Mayor,
subject to the approval of the Board of Aldermen.]

Terms expire April 30, 1898.

WILLIAM P. FOWLER, *Chairman*, EDITH P. WOLCOTT,
THOMAS SPROULES, CHAS. F. PARKER.

Terms expire April 30, 1899.

ISAAC T. CAMPBELL, HENRY V. CUNNINGHAM.
RACHEL E. S. THORNDIKE,

Terms expire April 30, 1900.

RICHARD C. HUMPHREYS, FREDERICK W. STUART,
ANNETTE P. ROGERS, MATTHEW J. MULLEN.

FREDERIC W. LINCOLN, *Treasurer*.
BENJAMIN PETTEE, *Secretary*.

The Board meets on the first Wednesday of every month,
at its office in Charity Building.

The Overseers of the Poor are likewise incorporated as a Board of Trustees of John Boylston's and other charitable funds, left for the assistance of persons of good character and advanced age, "who have been reduced by misfortune to indigence and want."

COMMITTEES.

Investigation and Relief.

Messrs. Fowler and Sproules, Miss Rogers, Mrs. Wolcott, Mr. Humphreys, Mrs. Thorndike and Mr. Mullen.

Finance and Accounts.

Messrs. Stuart, Campbell and Parker.

Settlements and Legal Questions.

Messrs. Cunningham and Mullen.

Supplies.

Messrs. Parker, Sproules and Fowler.

Temporary Home.

Miss Rogers, Mrs. Wolcott and Mr. Sproules.

Lodge for Wayfarers and the Woodyard.

Messrs. Humphreys, Fowler and Parker.

Building.

Mr. Sproules, Miss Rogers and Mr. Parker.

Real Estate.

Messrs. Humphreys, Cunningham and Mullen.

Medical.

Dr. Campbell, Mrs. Thorndike and Dr. Stuart.

Burials.

Messrs. Dr. Stuart and Dr. Campbell.

Boylston Education Fund Beneficiaries.

Mrs. Wolcott, Mr. Humphreys and Mrs. Thorndike.

Holton Funds.

Miss Rogers and Messrs. Parker and Mullen.

OVERSEERS OF THE POOR WERE FIRST CHOSEN IN BOSTON IN 1691.

MEMBERS OF THE BOARD FROM ITS REORGANIZATION IN 1864.

- * Allen, Ira, 1868 to 1875 (died August 29).
- * Amory, Thomas C., 1864 to April, 1883.
- * Atkins, Ebenezer, 1864 to December 31, 1867 (died).
Ayer, James B., April, 1890, to May, 1893.
- * Bailey, Joseph T., November, 1866, to 1871.
- * Bigelow, Alanson, 1875 to April, 1881.
- * Blasland, Thomas, 1866 to 1873 (died September 5).
- * Buckley, Joseph, 1864 to 1875.
Burnham, Daniel S., from April, 1885, to May, 1891.
- Campbell, B. F., October, 1882, to July, 1888.
- Campbell, Isaac T., 1873 to date.
- Caton, Asa H., December, 1890, to 1893.
- Coleman, Charles, 1893 to May, 1896.
- * Crane, P. M., 1870 to 1882 (died August 13).
Cruft, Samuel B., 1871 to 1877.
- Cunningham, Henry V., 1893 to date.
- Curry, M. C., 1883 to May, 1896.
- * Curtis, George, 1876 to September, 1878.
Davis, James G., 1880 to 1886.
- Dore, John P., 1879 to May, 1891.
- Downey, Thos., jr., 1887 to April, 1890, and May, 1891,
to January, 1895.
- * Fabyan, George, 1869 to 1874 (died May 25).
Fisher, Andrew P., from April, 1889, to May, 1893.
- Fowler, William P., from April, 1889, to date.
- * Friedman, Solomon, 1886 to December, 1890.
Gargan, Thomas J., 1874 to 1875.
- * Gorman, William, 1877 to 1880 (died January).
- * Griffin, Martin, 1864 to 1869.
- * Hale, George S., 1865 to 1871.
- * Hull, Liverus, 1874 to April, 1883.
Humphreys, Richard C., May, 1890, to date.
- Lamb, John, 1891 to May, 1897.
- * Lawrence, William R. 1864, to November, 1865.
Lincoln, F. W., May, 1867, to April, 1878.
- * Little, James L., November, 1865, to November, 1876.

- * Lothrop, Loring, 1864 to April, 1870.
Logue, Charles, May, 1896, to January, 1898.
Madden, Daniel A., 1883, to April, 1889.
Mullen, Matthew J., July, 1897, to date.
- * McLean, Charles R., 1868 to 1871.
- * Newmarch, S., 1864 to 1865.
Newell, Otis K., from July, 1888, to May, 1891.
O'Brien, John, 1871 to 1874.
Parker, Augustus, November, 1878, to April, 1880.
Parker, Charles F., June, 1895, to date.
- * Parker, F. E., 1864 to 1875.
Pickering, H. W., 1875 to April, 1884.
Prescott, Washington L., 1875 to December, 1878.
Richards, Henry L., 1877 to August, 1878.
- * Richards, Joel, 1864 to 1866.
Ring, Thomas F., November, 1878, to April, 1887.
Rogers, Annette P., 1891 to date.
- * Sawin, Samuel D., April, 1884, to July, 1890 (died).
Scott, John A., April, 1881, to April, 1884.
- * Spooner, William B., 1864 to 1868.
Sproules, Thomas, 1883 to date.
- * Stackpole, Stephen A., 1880 to April, 1883.
Stuart, Frederick W., December, 1896, to date.
Sullivan, Daniel F., 1893 to June, 1895.
Sweetser, John, December, 1878, to April, 1879.
Temple, Thomas F., 1870 to April, 1890.
Thorndike, Rachel E. S., May, 1896, to date.
Turner, John, September, 1890, to May, 1893, and January, 1895, to November, 1896.
- * Warren, John W., 1864 to April, 1866.
Welch, William J., April, 1884, to April, 1889.
Willcutt, Levi L., 1878 to April, 1885.
- * Winthrop, Robert C., 1864 to May, 1867.
Wolcott, Edith P., 1893 to date.

Chairmen.

- * Winthrop, Robert C., July, 1864, to May, 1867.
Lincoln, F. W., June, 1867, to April, 1878.
Temple, Thomas F., April, 1878, to December 31, 1878, and from April, 1881, to April, 1890.
- * Amory, Thomas C., January, 1879, to April, 1881.
Newell, Otis K., April, 1890, to May, 1891.
Fowler, William P., May, 1891, to date.

Treasurers.

- * Warren, John W., July, 1864, to January, 1865.
- * Norcross, Otis, January, 1865, to January, 1876.
- * Higginson, George, 1876 to 1878.
- Lincoln, F. W., April, 1878, to date.

Secretaries.

- * Pratt, John, July, 1864, to November, 1874 (died).
- Pettee, Benjamin, November, 1874, to date.

*Occupants of Charity Building.**Basement Rooms.*

City Physician	Nos. 3 and 4
Homœopathic Dispensary	No. 5
Federation of Jewish Charities	Nos. 11 and 13

First-Story Rooms.

Overseers of the Poor	Nos. 15 to 20
State Aid Paymaster	" 21 to 24
Industrial Aid Society	" 25 to 28

Second-Story Rooms.

Associated Charities	Nos. 30 and 31
Boston Ladies' Sewing Circle	" 35 and 37
Boston Provident Association	Nos. 32, 33, 38 and 40
Society of St. Vincent de Paul	No. 36
German Aid Society	" 39

Third-Story Rooms.

Hall for General Meetings	No. 41
Boston Children's Aid Society	" 43
Co-operative Society	" 48
Ward 6 Conference, Associated Charities	" 49
Ward 8 Conference, Associated Charities	" 50
Ward 7 Conference, Associated Charities	" 51

In addition to the above, the Boston Police Relief Association holds its annual meeting here.

SCHEDULE OF PROPERTY IN CHARGE OF THE BOARD.

Charity Building: four rooms, occupied by the Board and its officers, have furniture needed for their use, desks, cases, chairs, etc.

City Temporary Home is supplied with furniture necessary to provide temporary accommodations for homeless women and children.

The Lodge for Wayfarers, for men, has furniture suitable for its use. At the Lodge, and at the wharf hired for the storage of wood, there are at the present time about 210 cords of wood. Also one wagon.

In a storehouse in the yard of Charity Building: the following groceries for delivery to the poor, and store-fixtures—

19 $\frac{1}{4}$	bbls. sugar.	84	cans cond. milk.
13	chests tea.	215	$\frac{1}{2}$ lb. boxes cocoa.
10 $\frac{1}{4}$	boxes soap.	274	bushels potatoes.
2 $\frac{1}{4}$	bbls. Indian meal.	1	bushel peas.
4 $\frac{1}{3}$	bbls. rice.	87	lbs. cotton twine.
5 $\frac{1}{6}$	bbls. salt pork.	32	lbs. jute twine.
81 $\frac{1}{2}$	bbls. flour.	1,300	tags.
61	packages paper bags.	10	dry measures.
196	baskets.	8	tunnels.
438	lbs. paper.	5	chairs.
6	scales.	1	truck.
8	scoops.	2	hatchets.
2	desks.	1	meat-saw.
39 $\frac{1}{2}$	bushels beans.	1	butcher-knife.
6 $\frac{3}{4}$	bbls. oatmeal.	1	meat-hook.
1,250	lbs. salt fish.	1	shovel.



ANNUAL REPORT
OF THE
PARK DEPARTMENT
FOR THE YEAR 1897.

COMMISSIONERS' REPORT.

HON. JOSIAH QUINCY,

Mayor of the City of Boston:

SIR: The Board has the honor herewith to submit to you its report for the financial year 1897-98.

The comprehensive report of our Superintendent, herewith presented, leaves little to be said by the Commissioners.

The work of the present Board is to complete such parts of the parks as have been left unfinished, and to put the whole system into such condition as will call for the least annual expense for maintenance. To accomplish this, we propose to avoid as far as possible the erection of buildings not absolutely needed for the convenience of the public, and, when buildings, bridges and other constructions are required, to build them in such a manner that the cost of repairs will be reduced to the minimum. For a similar reason we deem

it advisable to dispense with roads and paths which are not really necessary, and, in some cases, where new roads and paths are built, to restrict their width to present needs.

The large amount of road-building carried on in the parks during the past fifteen years, in order to open them to public use, has much delayed the planting of trees and the improvement of the natural woods. We have, therefore, devoted special attention to this branch of park construction; 30,000 trees and 100,000 shrubs have been purchased; new nurseries have been laid out and filled, and preparations have been made for extensive plantations in all the parks and along the parkways which still remain unshaded. A beginning has been made toward restoring the old woods in the different parks to a natural condition by gradually removing from them tree weeds which, escaping from neighboring gardens and springing up often in great quantities, have prevented the growth of native trees and the undergrowth essential to their welfare, and have spoiled the beauty and naturalness of the park woods; and many trees, most of which were dead, dying or diseased, have been removed, in order to allow the development of their more healthy and vigorous neighbors. The good results of this work can be seen already, and will grow more apparent as time goes on. In Franklin Park the blending together into one harmonious natural picture of an aggregation of large and small country places and farms, each planted independently, has made it necessary to cut many trees along old boundary lines.

We propose in future park plantations to use largely the trees and shrubs native to Massachusetts, because these grow here more successfully, live longer, and require less labor to keep them in good condition than the trees and shrubs of foreign countries. More natural and therefore more artistic results can be obtained by the use of the native flora, than by a promiscuous mingling together of the plants of different parts of the world; and such a selection we believe, moreover, will have the effect of reducing very materially the future cost of keeping the park plantations in a healthy and satisfactory condition, especially if the plantations are made in the first place, as we propose to make them, in a thorough manner. In Franklin Park, especially, natural woods, glades and meadows, which should be its essential features, can be reproduced, as far as it is possible for art to reproduce nature, by employing only such plants as nature herself, undisturbed by man, uses in this part of the country. Many boundary trees have been, and are to be, planted, to mark the limits of the parks, and to protect those who use them, as far as possible, from the sights and sounds of the city.

One of the greatest enemies to the peace and quiet of the parks, and, therefore, to the great end for which city parks exist, is the electric street railway with its hum and buzz and its disfiguring poles and wires.

A successful resistance was made to the strongly urged scheme of carrying an electric road across Boylston Bridge in the Fens, and the road is now being built around the Fens, instead of across them, to the incalculable advantage of the park-using public, and, we feel sure, to the ultimate profit of the owners of the neighboring lands.

The condition of the Back Bay Fens is a cause for serious anxiety. The water from Stony Brook, during periods of ordinary flow, is carried round the Fens and discharged directly into the Charles river. During periods of freshet, however, the extra flow is discharged directly into the Fens with the result that the basin is being gradually filled with an offensive deposit. These overflows usually occur at periods of high tides which cover the marshes, and leave, when the tides recede, a deposit of sewage matter on the marsh grasses. The amount of the discharge of vegetable matter is likely to increase rather than to diminish, as the country about the head of Stony Brook is developed and new streets are laid out. The largest part of the offensive matter in the Fens now consists of street surface drainage brought down from catch-basins in the streets of Roxbury and Jamaica Plain. It seems to us that this evil can only be remedied by providing a covered channel, either through one of the streets adjacent to the Fens or directly under the water of the Fens, large enough to carry all the flood water of Stony Brook into Charles river and thus prevent any flow into the basin of the Fens except the tide-water from the river.

The only lands acquired by the Board during the past year, other than for playgrounds, are the land and flats between the Old Colony Railroad and the land formerly taken for the Strandway. The proposition for the removal of the Old Colony Railroad from its present location to a new one farther west brought up the question whether the proposed abandonment of its old road-bed did not offer an opportunity to secure the extension of the Strandway much more quickly and at far less cost than the original plan. The Mayor strongly supported this view in connection with a plan to connect Franklin Park with the Strandway on the line of Columbia street. A bill for this purpose was introduced into the Legislature and became a law, under which the Street Commissioners were authorized to construct a road,

part of which should be a parkway and part a traffic-way, from Franklin Park to Marine Park, traversing Dorchesterway and Strandway where necessary for the accomplishment of this object. Plans were accordingly prepared by the Street Commissioners, in consultation with this Board, and adopted for the construction of the new Columbia road. The passage of this act made it desirable to secure the land and flats, lying between the original line of the Strandway and the Old Colony Railroad, and the Board, therefore, made a taking on June 9, 1897, of so much of the land and flats as the appropriation available therefor would warrant.

As the city has grown, the vacant land, on which children have heretofore had a chance to play, becomes more and more scarce. Some parts of the city are already so built up that, unless spaces in the way of parks and playgrounds are secured, the young people will be deprived of the healthy sport of childhood, which is their birthright.

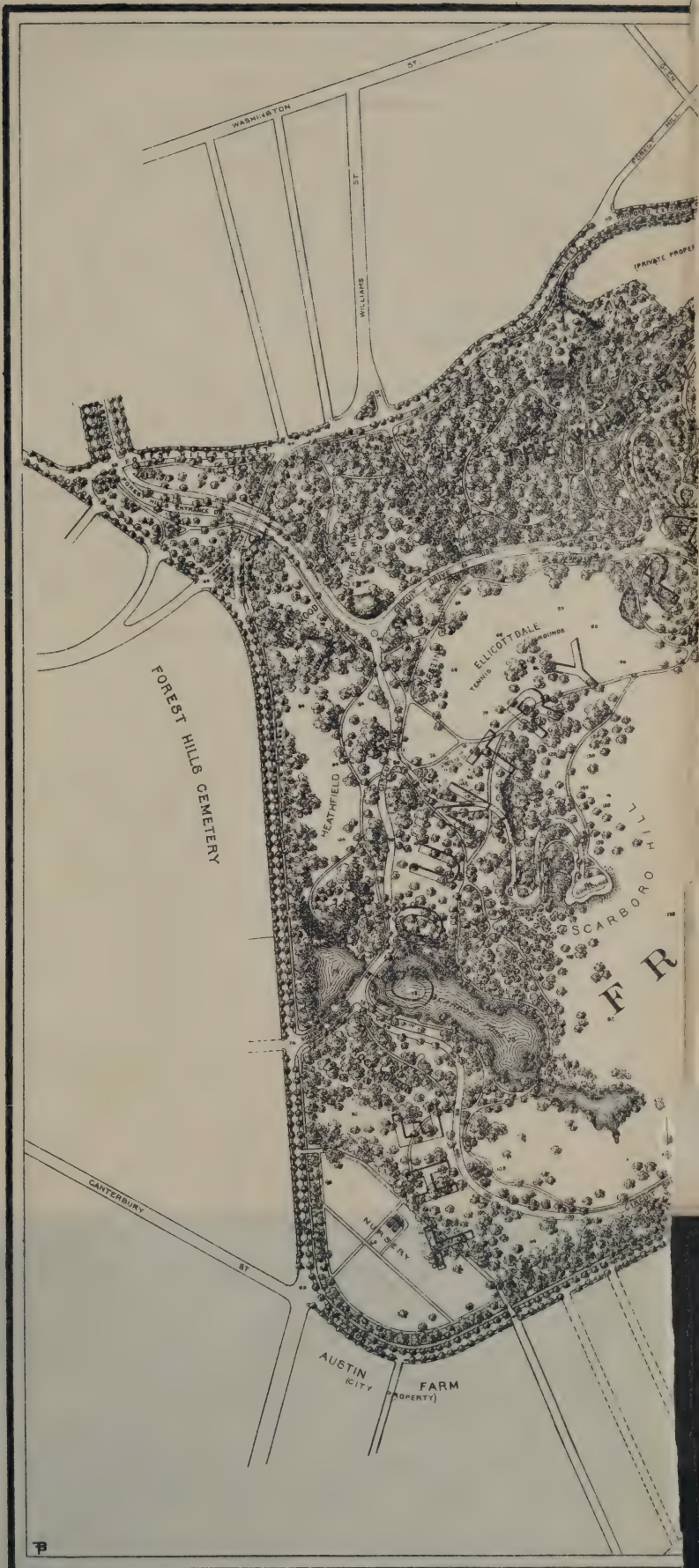
It is a wise policy to provide local playgrounds throughout the city, before land becomes too expensive, particularly as, in thickly inhabited localities, a playground large enough to accommodate baseball and football players must of necessity be very costly. But money wisely spent to purchase such land will be the best and most permanent investment possible for the city, and generations yet to come will be thankful for our forethought.

Some parts of the city are now well provided with playgrounds, while other localities have none. Therefore it has seemed wise to the Board to apply to the Legislature for an act, which shall provide for a comprehensive system of playgrounds in the city. It is hoped that power will be given to the Board, with the approval of the Mayor, to purchase land for playgrounds in such different localities, not exceeding twenty in number, as they may deem best adapted for such purpose.

The improvement and equipment of newly-acquired playgrounds and those already in existence not improved must be left to the future. It is hoped that the city will provide, inside of the debt limit, each year, sufficiently for this object.

The Board suggests to our citizens that they have the opportunity to use their money for the lasting benefit of the public in the purchase or equipment of playgrounds and thus to create for themselves an ever-enduring memorial.

A descriptive list of the playgrounds will be found in the Superintendent's report, those acquired during the past year being so marked.



The contract work of the department was continued during the year with Mr. E. W. Howe of the City Engineer's department as assistant engineer in charge, an account of which work will be found in the City Engineer's report.

As the engineering force was disproportionately large for the amount of work on hand, and as the period of park construction was about at an end, the Board concluded that the present engineering force at the department headquarters would be sufficient for all present needs, and notified the City Engineer that the department desired to be relieved from further expense on account of the services of Mr. Howe and his assistants. In taking this action the Board placed the following on its records: The Board of Park Commissioners of the City of Boston desires on parting with the services of Mr. Edward W. Howe, to put on record its high appreciation of the ability, fidelity and integrity with which he has performed his duties to this department during his many years of service.

The Board took occasion also to thank the City Engineer for his constant and appreciative interest in its work, and his many and most valuable services.

We cannot close our report without expressing our entire satisfaction with the work of our Superintendent, the good results of which are everywhere manifest in the parks, as well as in our financial statement. The City is fortunate in having secured the services of so devoted and competent a man as Mr. Pettigrew.

Respectfully submitted,

CHARLES E. STRATTON,
LABAN PRATT,
JOHN T. WHEELWRIGHT,

Commissioners.

January 31, 1898.

SUPERINTENDENT'S REPORT.

TO CHARLES E. STRATTON, LABAN PRATT, AND JOHN T. WHEELWRIGHT, *Board of Commissioners of the Department of Parks, Boston:*

GENTLEMEN: I herewith submit my report for the year ending January 31, 1898:

FRANKLIN PARK.

The current year commenced with tree thinning in the woods and plantations of Franklin Park. This is one of the important operations in park making: sound, healthy trees cannot be grown under crowded conditions, the side branches are killed for want of light and air, and nothing is left but the top branches, each struggling to overcome the other in search of light. While it is not necessary, or even desirable, in woodland to have each tree a perfect specimen, yet each may retain in some measure its individuality or characteristic beauty, without impairment of naturalness in massing for woodland effects.

The careful and intelligent thinning out of such woodlands produces better conditions for tree growth: the branches spread out, the boles, under the influence of more light and air, gradually put forth branches, while ground cover, undergrowth, and saplings for the same reason begin to grow below. In this work care is taken to retain and emphasize, in the direction indicated, any natural or pleasing features already existing, and at the same time to bear in mind the difficulty of policing dense tangles of wood growth.

On the sites of old residences, and on fence lines within the park, considerable cutting had to be done, to thin out the neglected tangle of former plantations of trees and shrubs of foreign origin, which, from their position, character, or condition, could not be blended into a harmonious connection with their surroundings.

On the boundary lines of Franklin Park, including Morton street, Canterbury street, Blue Hill avenue, Seaver street, and Sigourney street, large areas have been prepared for screen belts of timber trees; the ground, having been ploughed and subsoil-ploughed several times during the past summer, is in a fine mellow condition for planting next spring. The intended permanent trees will be planted at from twenty-five to forty feet apart, according to their expected growth,



ENTRANCE TO PINE BANK, JAMAICA PARK.

and the intervals thickly planted with other trees to serve as protection. As growth progresses and they interfere with each other, the nurse trees may be removed for transplantation elsewhere, so that the plantation will serve the purpose of a nursery as well. To encourage rapid growth in these border plantations, cultivation should be maintained for at least three years, when grass or some suitable ground cover may be planted among the trees.

Franklin Park and other portions of the park system contain a large area of rocky, sterile hills and slopes, where the thinness of the soil will not permit of fine tree growth. During the past season, such grounds have been treated with a dressing of commercial fertilizer, containing a large proportion of the elements that enter into tree growth. This is good in its way, yet under such conditions it is simply begging the question. The want of a suitable depth of soil must be met, or the same stunted growth that we see to-day will meet the eyes of posterity. True economy and a regard for the future demand that this essential to successful tree growth be supplied without delay. A large quantity of trees and shrubs of mostly native kinds has been purchased during the past year, amounting to about 30,000 of the former and about 100,000 of the latter. The stock is in very fine condition; maples, oaks, beeches, ash, and lindens, predominate among the trees, while the shrubs consist largely of cornels, thorns, viburnums, Judas trees, sumacs, and witch hazels. The greater proportion of this stock will be planted next spring, on the grounds that have been prepared during the past summer.

The removal of the Williams house and repair shops from the centre of Franklin Park has been accomplished with gratifying results, the site being graded and made ready for planting to bring it into harmony with the surrounding grounds.

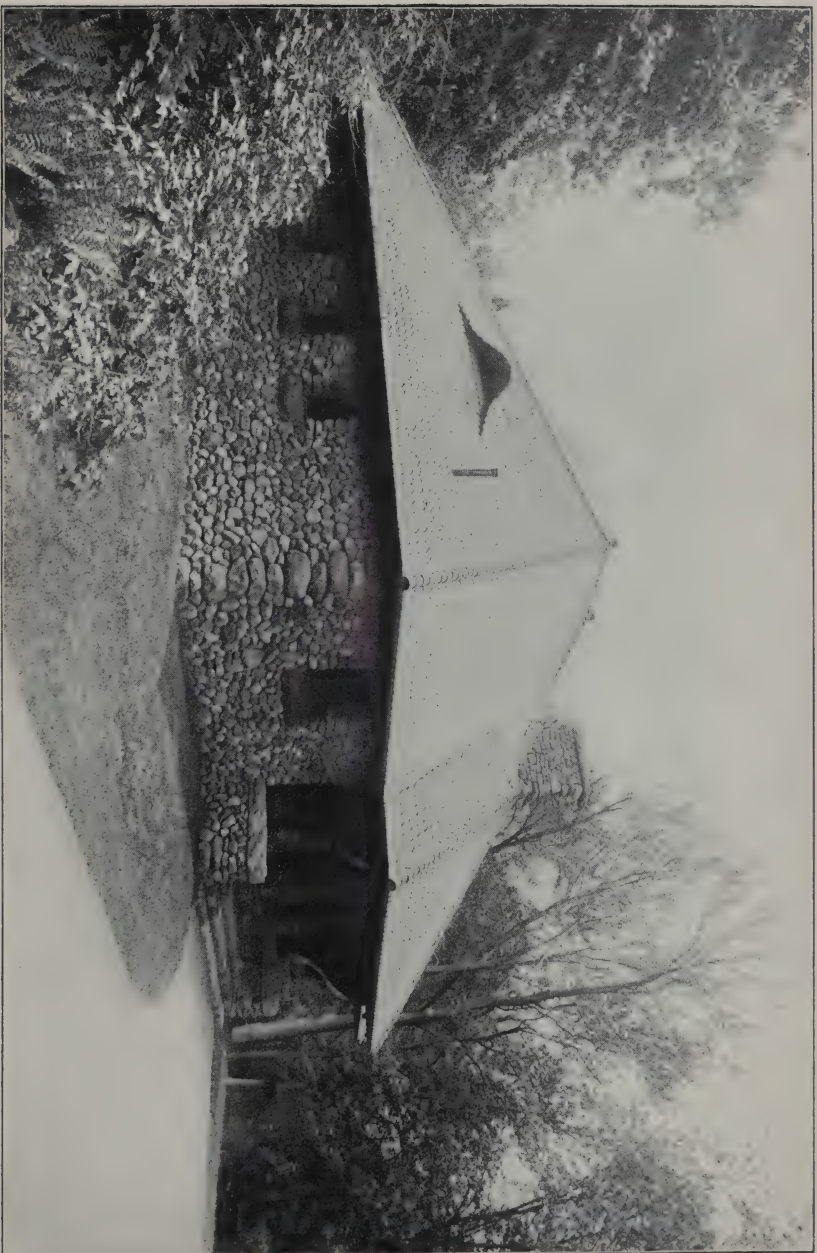
By the transfer (which you have ordered) of the sheep from the barn at Scarboro' Hill to the barn at Franklin Field, which will be accomplished early this spring, another disfigurement on the face of the park will be obliterated by the tearing down of the sheep barn and shepherd's house. The repair shops moved from the site of the Williams place have been set up as temporary shops in a hollow near the greenhouses at Morton street, a location easily hidden from the park drives. The selection of this place will enable the department to concentrate all shops, barns, storehouses, greenhouses, and necessary administration buildings, for a large district at one point, effecting thereby a saving in time

and money by reason of convenience and availability, as well as ease of management. For the permanent buildings, it would be well to have plans prepared, so that the work of erection could be completed during the coming summer.

The grading and planting done last spring in Franklin Park comprised the planting of the border mound at Blue Hill avenue; the grading and planting of the refectory and horse-shed grounds; and the grading and planting of the grounds on either side of the drive from Forest Hills street to the forks of the road east of Forest Hills bridge. A number of young hemlocks have been moved from various parts of the park, where too thickly crowded, to the hill on which the Peters' house stands. These were transplanted with frozen balls of earth, and ranged in height from five to nine feet; to quicken the foliage effect and to give shelter, clumps of birches have been planted among them. This plantation will in time tend to broaden the evergreen effect along the drive leading to Scarboro'-Pond bridge, the hill of the opposite side of the drive being clothed principally with a growth of fine white pines.

Among the improvements planned and ordered by the Board for the coming season in Franklin Park may be mentioned the drainage of Nazindale. This charming valley is a natural drainage course, the flow of which is not sufficient to form a brook, and which frequently is dry altogether. Thereby it forms a marshy hollow for the greater part of its course, and is filled with coarse marsh-grasses and rushes. These, trampled by the feet of golfers and other frequenters of the park, produce an effect neither natural nor artistic. The plan of drainage will carry the water in an underground channel, which, with tile drains running laterally, will bring the ground into condition for the forming of a simple turf-covered valley. This will greatly enhance the beauty and simplicity of the large meadow, and will be a great convenience to the public. In connection with this a branch pipe will be carried to Scarboro' Pond to replenish its waters when necessary and opportunity offers.

Another work of improvement planned for execution this season is the formation of a long grassy glade, extending from Blue Hill avenue to the Playstead, and lying between Glen road and Seaver street. The natural features favor this treatment of the ground, and the work will not be of a costly character, being simple in design. The heaviest item of cost will be loam, the rock being mostly near the surface. It will effect, too, the removal of the piles of stone which have so long littered the ground, and bring into use and enjoy-



ELLICOTT HOUSE, FRANKLIN PARK.

ment a very beautiful and convenient part of the park. The glade will be bordered on both sides by a meandering path, which will be of great convenience to those wishing to reach the Playstead from the cars at Blue Hill avenue.

FRANKLIN FIELD.

The principal works of improvement at Franklin Field, during the past year, consist of the erection of two commodious sanitary buildings, with connection with the sewerage and water systems of the city; the seeding of five or six acres of its surface, and the preparation, by loaming, of a part of its Blue Hill avenue boundary line for planting.

This noble playground is growing in popular favor; the turf is improving in condition with each season. It is to be regretted, however, that cavalry manœuvres damage the turf, the character of the soil over the greater part of its area being peaty, and it would be greatly to the benefit of all users of the Field were equestrian exhibitions prohibited.

No extensive improvements are planned for the Field this summer, nor are any especially called for, excepting possibly that a shelter for the public is needed against storms; a large open-sided pavilion would best serve the purpose. Preparation also might be made for planting by loaming the bordering belt of the Field.

THE ARBORETUM.

Work on the Peters' Hill extension of the Arboretum was continued early last spring by contract for sub-grading a part of the encircling driveway, about 2,600 feet in length. On the completion of this contract in the fall, the work was continued by the park force on the remaining portion, about 4,200 feet long, which was nearly completed before the advent of cold weather. Nearly the whole length of the drive required tile drainage to take the seepage from the hill. A considerable quantity of ballast was also laid, and the work will be pushed to completion as soon as the season opens. This will open to the public, a drive from which charming views of the surrounding country can be had, by reason of its elevation and commanding position.

Early in the spring the old crusher plant was removed from Franklin Park to the ledge on the line of Bussey street in the Arboretum. This, with the new plant erected the previous year, was kept in operation during the season crushing stone for the traffic roads of the Arborway. The stone, except a vein or two of poor material, proves to be

very good. A new engine and boiler have recently been purchased for the old plant, which will add much to its effectiveness.

JAMAICA PARK.

Work, under a contract, was begun in Jamaica Park last spring by the sub-grading of the driveway along the west side of the pond. On the completion of the contract for grading, the Board ordered the drive macadamized. The work was barely commenced, when it had to be suspended to allow the Metropolitan Water Commissioners to lay their large main through the bed of the driveway. The season being far advanced when they finished, macadamizing of the roadway was postponed until spring.

About 4,100 cubic yards of loam were spread on the slopes on the Prince and Perkins street sides, in the endeavor to get the ground in readiness for planting; the Perkins street side was completed, but considerable loam is yet needed for the Prince street side before planting can be done.

A walk has been constructed along the pond at Perkins street, which will be continued down the west side of the pond, to connect with the walk near Pond street.

The slope at Perkins street will be planted with red maples, thorns, viburnums, and other native shrubs, while on Prince street side, beeches will be introduced, wherever practicable.

The threatened permanently low level of the water in Jamaica Pond discloses a larger margin of gravelly shore than is desirable. To correct this and bring the foliage line nearer to the water, part of the beach at Perkins street has been excavated and loam substituted, and, to prevent any damage by a temporary stage of high water, the sill of the overflow will be lowered. Should conditions arise, however, promising a continued stage of high water, the sill can be restored to its original height. On account of the abandonment of the bathing-house scheme at the south end of Jamaica Pond, the coves have been filled up and graded to correspond with the slopes adjacent. The old laundry building at Pine Bank has been removed, and the stable will follow when the horse-sheds, which have been authorized by the Board, are erected next season. The construction of a road and path to the offices of the Board from the parkway, and the continuation of the path to the steps at Perkins street, are the immediate necessities at Pine Bank, second only to the desirability of doing the necessary planting at the earliest possible time.

ARNOLD ARBORETUM—LOOKING SOUTH TOWARD FOREST HILLS.



LEVERETT PARK.

The low water in Jamaica Pond rendered ineffective the pond and brook arrangement at Ward's Pond, since they were supplied from the overflow of Jamaica Pond, to remedy which, the Board decided to fill up two of the ponds and make a rearrangement of the paths to conform to the change.

THE RIVERWAY.

Considerable work was done last spring remodelling the plantations along the Riverway; scattering shrubs were gathered together in groups and masses of irregular shape, openings being occasionally left for turf spaces or for planting with low ground cover. A large number of shrubs were added, and a number of willows were removed and used for nurse trees in the Wood Island plantations.

THE FENS.

Throughout the Fens district, a good deal of work has been done during the fall months in rearranging shrubberies. The shrubs "planted thickly" have grown into tangled masses, strong-growing kinds overcrowding and killing the smaller. In great part the herbaceous plants have been removed from the borders of the driveways and bridle paths, and the ground dug over to plant with prostrate or low growing shrubs. The reason for this change being that the leaves and flowers of the herbaceous plants lose much of their charm and attractiveness from the dust thrown on them from the roads. These plants will still be retained along the inner paths.

The Fens charm because of an apparent wildness, and an appearance of being left to nature. The opinion prevails that such a treatment is economical and easily maintained. Never was greater mistake; constant attention is necessary to prevent the loss of colonies of plants from overcrowding of trees and shrubs, or from weeds and grasses. It is not too much to say that, as between an arrangement with herbaceous plants, as now obtains, and a treatment with shrubs and trees with grassy open spaces, the difference is as three to one in favor of the latter in point of economy.

The silt from Stony Brook has accumulated in the Fens channel, in a deposit extending from the outlet to Agassiz bridge, averaging about three feet six inches in depth. This deposit is very offensive when the water is lowered in the Fens, and is probably a menace to health. The removal of this deposit is a necessity. At a conference

between the park and sewerage engineers of the city, held on the spot, the opinion prevailed that the method of removal that would cause the least annoyance and prove the cheapest, would be to pump the material through the conduit to Beacon street, then dredge or pump it again into dump scows, and carry it out to sea. The cost of the work has been estimated, and an appropriation for it asked for by the Street Department of the city. This work ought to be completed before warm weather sets in.

WOOD ISLAND PARK.

The work of improvement at Wood Island Park was again taken up during the past summer; stones and boulders collected during the process of grading, and amounting to about 2,000 cubic yards, were crushed into macadam. Paths aggregating 6,500 lineal feet were outlined and subgraded with shingle from the beach, on which substantial footpaths were constructed of the crushed stone, packed with fine stone screenings. Most of the slopes and open grassy spaces have been ploughed and subsoiled and planted with trees. The trees are planted very thickly so that they may afford protection to each other, the situation being a very exposed one. Several species of trees are planted,—willows, Norway maples, and ash, predominating, the intention being to select the species that thrive best for permanent trees, and cut out the less suitable ones when they interfere with the growth of the permanent ones.

The plan for this park provides for a driveway round its borders. This driveway does not seem to be either desirable or necessary; the park is small, containing only about forty-six acres, and a large part of its area is taken up by the ball field and gymnasium ground. It would be a pity to further curtail the space that should be occupied by trees and grass for the use of the people by cutting a drive through it. The necessity for a drive is not apparent, as the park can be covered from one end to the other in a walk of a few minutes. A carriage-stand could be constructed near the entrance for the accommodation of visitors bringing vehicles.

To meet a demand for out-door bathing, the building on the beach was opened to the public, and, in spite of the poor facilities afforded, large numbers of women and children availed themselves of the privilege, demonstrating the fact that the completion of this building as originally planned with wings for bathing-houses would meet a popular want.

The gymnasium and ball grounds were flooded during the past winter, and used for skating by many thousands.



DRIVEWAY IN ARNOLD ARBORETUM.

MARINE PARK.

The only work of improvement at Marine Park consisted of the purchase of about 500 yards of loam to increase the soil depth of the old plantation running parallel with Q street. The trees already planted indicate by their stunted growth the poverty of the soil and the severe exposure of the situation. This will be corrected by adding other trees of strong growing qualities for protection, planting between them the permanent trees, and adding loam to the surface.

The grounds surrounding the "Natural History Pools" have been subgraded, but nothing further has been done for several years, pending the settlement as to their disposition. In their present condition they are bare and uninviting, and a detriment to that portion of Marine Park. The filling up of the pools would prove very costly, and is not necessary, for by loaming, planting, and the making of a few walks, the place could be made attractive, and still would be available for the original purpose for which it was designed, should the funds for its execution at any time in the future be provided.

CASTLE ISLAND.

This delightful resort on the bay is deservedly popular with the public. Castle Island, in its simplicity, is always charming and inviting to those seeking rest and recreation. No work of improvement has been carried on here, nor is much needed, beyond the planting of shade trees, and the construction of sanitary buildings and of a shelter from sudden storms. The old hospital building has been cleared out, painted, calcimined and fitted with seats to serve as a temporary shelter until a permanent one can be erected. A 2-inch pipe for water-supply of the island was laid last spring along the Causeway from Marine Park.

CHARLESBANK.

This delightful breathing-spot is situated within easy reach of a large population in a congested part of the city. Its importance can hardly be overestimated, and its broad promenade commands a fine view of the Charles river. A necessary work of improvement is the reconstruction of the promenade; a pavement of brick or granolithic would be preferable, and one commensurate with the value and importance of the place. The present bed of the path is of loose, sandy gravel, very dusty under the influence of the strong breezes of the Charles-river valley. A pathway of

macadam, with a binder of stone screenings, would give less cause for annoyance in this respect.

The gymnasium gives opportunity for physical recreation to the adult population, and the children's playground for small children, but, for the romping children of larger size, Charlesbank offers no facilities. This might, in a measure, be remedied by levelling off a portion of the undulating ground, retaining only a mound along the Charles street side for a screen, and relaying the turf again, and thus providing a romping-place suitable for most games indulged in by boys and girls, excepting baseball, for which there is not sufficient space. Trees of value could be moved to other locations.

The usefulness of Charlesbank lies in its health-giving opportunities to a crowded population, and every advantage should be taken to improve those opportunities.

NORTH END BEACH.

At North End Beach, during the past season, were erected bathing-houses for men and women, with a pier extension into the bay, from the women's bath-house, of 322 feet, and from the men's bath-house, on the opposite side of the park, the pier extends 560 feet into the bay. Of these piers the women's is single-decked and canopy-covered, and the men's double-decked, the upper deck being open. The women's bath-house contains 150 bathing-rooms, laundry and laundry machinery, sanitary and heating arrangements. It was opened to the public July 4, and had a fairly successful season; the patronage, however, did not seem to be commensurate with the great advantages offered at a cheap rate, sea-bathing being brought right to the doors of the people living in the most congested part of the city at five cents per bath, including room, bath, suit and towel. The men's bathing-house was not completed in season for bathing. They were, however, accommodated in the women's bathing-house without overtaxing its capacity. A band stand was erected in the park for open-air concerts.

The experience of the past summer suggests that the proper treatment of North End Beach would be to transform it into a playground; arrangements of grass and shrubbery would be trodden out immediately; no reasonable effort could prevent it. The necessity for open spaces in the district is very great, and a plan has been prepared, by the department engineer, for simply grading to as easy a slope as can be adapted to the grade of the buildings, and one that will permit of flooding for winter skating. Even the removal

of the open brick sheds and the mound of earth on the north line is advisable, to give greater space for the swarming forth of the dense resident population in search of fresh air. The corner where the brick sheds now stand could be fenced off and filled up with clean sand for small children, a row of trees and a row of fixed seats could be established on the street line and north boundary line.

COPP'S HILL TERRACES.

The masonry retaining walls, steps and granolithic pavements of these terraces were completed last summer, and the borders were loamed in readiness for planting next spring; a drinking fountain was also erected.

GYMNASIUMS.

On page 29 will be found statistics of attendance at the various gymnasiums under the control and direction of your department.

At Charlesbank no expenditures have been incurred on extensions or improvements. A public exhibition was given on July 26, of the past summer, conducted by Mr. J. W. Bowler, who has charge of athletic instruction at this gymnasium. The attendance was large, and the work performed by the pupils was very creditable.

At the close of the summer session at Charlesbank, Mr. Bowler was transferred to Paris-street Gymnasium for the winter session. At that place he has been successful in establishing morning and afternoon classes, designed, in the character of work performed, to qualify the pupils, as far as physical qualifications are necessary, as candidates for the Police and Fire Department service. These classes have had a marked success.

PARIS-STREET GYMNASIUM.

The gift of Paris-street Gymnasium, by Mrs. Esther P. Ahl, added to this department an indoor gymnasium. The building is a wooden structure 137 feet by 98 feet, of one story and truss-roofed. A space 111 feet by 21 feet is set apart for reading-rooms, in which are to be found many of the leading papers and magazines. The lockers number 789.

The building will need extensive repairs if retained for its present purpose much longer, the foundations and roof being in bad condition. There can be no question of the benefits to be derived from the institution, by the crowded population in whose midst it stands. Apart from the advantage of

instruction in physical culture, the bathing facilities offered, even under the present arrangement, are a boon to many, as the statistics on another page will show. It would seem, then, that as the institution is well patronized and successful, it would be a waste of money to spend any large sum in repairs or alterations on an old building, and that it would be more desirable, and in the line of economy, to erect a new one — a plain brick structure, in which accommodation could be added for plunge and tub bathing, and for other features that it might be found desirable to include. The cost of a suitable building might be brought within very reasonable limits, were all unnecessary embellishments omitted. Its location and character do not demand any other requisites than, substantiality, neatness and adaptability.

At this gymnasium a new hot-water apparatus has been installed during the past summer, with new sprays for the shower-baths, and no trouble is now met from a want of hot water, the service being able to care for all comers. A set of six new chest-weight apparatus has been set up, replacing an old worn-out lot, and other pieces of apparatus have also been added. Patent burners of incandescent pattern have been affixed to the gas fixtures, to lessen the large gas bills. The place as a whole is in good running order, and, as the table of statistics shows, well patronized. Mr. James A. Walsh conducts classes in the afternoon and evening, and has general supervision of the special work in athletics of the gymnasium pupils, in class intervals, the work being divided between Mr. Walsh and Mr. Bowler, who has a similar charge during the mornings and two afternoons of each week.

WOOD ISLAND GYMNASIUM.

This gymnasium during the summer months is under the direction of Mr. Walsh, and has, during the past summer, maintained its character as a popular resort for those in search of instruction in physical culture.

It is to be regretted that so many of the frequenters of the department gymnasiums are averse to performing class-work, and prefer to attempt to develop some particular qualification of which they fancy themselves possessed. The mission of the gymnasiums under the control of the department is principally to give such instruction as will tend to build up strong healthy frames, not to encourage the development of special parts for special lines of work, which is frequently done at the expense of other parts of the body. The dangers

arising from this abuse of privilege could be entirely remedied, were such lines of work permitted only on certificate, of a competent authority, that the pupil was fit physically to undertake the work proposed. By thus making special work dependent on general physical development, the classes would be more largely attended, and the intent and purpose of the gymnasium be the more fully carried out.

THE PARKWAYS.

The work of improving the parkways was continued during the past season. Traffic roads for the accommodation of abutting residents were constructed on the Arborway, between Prince and Centre streets, and from Centre street to the top of the hill toward South street; the loam spaces were enlarged to admit of a larger body of loam for tree growth; red oaks were planted along the Arborway from South street to Centre street, and shrubbery on the borders and sloping banks. American lindens were planted for line trees on the Riverway from Brookline avenue to Leverett Park.

COMMONWEALTH AVENUE.

Pending the adoption of a more permanent improvement, a cinder walk is now being laid on the central promenade. This material, while a little dusty occasionally, has the merit of being at all times pleasant and dry for the feet. A part of the roadway two blocks long, and two street crossings, were, during the past fall, surfaced with five inches in depth of crushed stone; the remainder of the drives was surfaced with coarse screenings and rolled.

PLAYGROUND REQUIREMENTS.

Under the control of the Park Department are a number of playgrounds on which the work of development will soon commence, and the question of how it shall be done is an important one. Tentative plans have been prepared for the work, but the treatment proposed in most cases would seem to be too elaborate for a useful and hardworked playground. Shrubby and grass, except in playgrounds of large extent, could not be maintained, and it is not to be expected that boys and men, in the excitement of games and contests, would respect such embellishments, if they came in their way, nor should it be required of them. The ground should be clear of all obstacles or decorations of a nature that would interfere with its full and free use.

Generally speaking a field simply graded, drained, and covered with three inches of screened cinders, surrounded by a fence and a row of trees planted within the fence, with a continuous row of fixed benches next to the trees, for protection to them and for the convenience of onlookers, together with suitable sanitary and shelter buildings, would meet the requirements of a playground. When space can be spared, apparatus of a simple character could be introduced for those wishing gymnastic exercise, such as would not need the instruction of an expert. By the simplification of these details much can be saved in maintenance expenses.

PLAYGROUNDS.

The location, area, and present condition for use of the playgrounds of the city are as follows, those acquired by this department during the past year being marked with an asterisk:

BACK BAY.

Boston Common. — A portion of the Parade Ground has been used as a playground from early times. (In charge of the Public Grounds Department.)

NORTH END.

(*a.*) *North End Beach and Copp's Hill Terraces.* — Containing three acres of upland, and four acres of beach and land covered by water. About two acres are being prepared for use as a playground, in addition to which the terraces, the beach, the promenade piers and bath-houses, are available for recreation.

(**b.*) *North End Playground.* — This playground contains about one-fourth of an acre, and is located in the most densely populated part of the North End, lying between North Bennet and Prince streets and adjoining Paul Revere School. The site was cleared of buildings last summer, and levelled. In the spring screened ashes will be spread over the surface. For a permanent surface, a granolithic pavement would be best.

WEST END.

Charlesbank. — Containing ten acres, two acres of which are devoted to the men's gymnasium, and one acre to the women's gymnasium and children's playground. Both gymnasia are fully equipped with gymnastic apparatus, and locker and lavatory buildings. The men's gymnasium grounds are used in winter for skating.

SOUTH END.

(*a.) *Fellows-street Playground.* — This playground is a small plot of three-quarters of an acre, suitable for a little folks' playground, its restricted area not permitting it to be used for ball games and other rough sports. The original lot had been laid out with walks, trees, and shrubbery, leaving a playground in the centre. The result proved the futility of planting shrubbery in a playground, both shrubbery and trees being ruined by the rough usage of the boys. The subsequent acquirement of more ground necessitates a change of plan, when a more rough and ready style of treatment can be adopted, including teeter boards, swings, sand-pits, etc., suitable for children, leaving as much space as possible for their games.

(b.) *Orchard Park.* — Containing two acres. (In charge of the Public Grounds Department.)

EAST BOSTON.

Wood Island Park. — Containing forty-six acres of upland, besides beach and flats covered by tide water. Four acres are laid out, and equipped for a men's gymnasium with field house, and five acres are devoted to a playground. Skating is provided for at these grounds in winter.

CHARLESTOWN.

(*a.) *Mystic Playground.* — Chelsea street and Scott's court. This playground contains about two and one-quarter acres, and adjoins the Mystic river. It is too restricted in area for ball games, and the best use to make of it would be to adapt it entirely to the use of children, equipping it in about the same manner as Fellows-street Playground. No other work of improvement has been done than simply grading the ground, and dressing the surface with screened cinders.

(b.) *Charlestown Heights.* — Bunker Hill and St. Martin streets; containing four acres of upland (one acre in children's playground) and six acres of flats. The latter, when filled in, will serve as a playground and bathing-beach.

(c.) *Charlestown Playground.* — Main and Alford streets, near Sullivan square; fourteen acres, enclosed by sea wall. The work of filling in this playground is going on rapidly. About nine acres have been filled, and a large part of it has been levelled, and is in good condition for ball playing. The

preparation of the loam spaces for tree planting could be advantageously done during the coming season.

SOUTH BOSTON.

(* a.) *First and M-street Playground.* — This playground, containing about five acres, was formerly a city lot, in charge of the Public Institutions Department. It was afterwards put in charge of the Public Grounds Department, and later was transferred to this department. During the past season it was roughly sub-graded and the lawn spaces were loamed under contract; subsequently it was finely graded, and a gymnasium ground and ball-field laid out according to plans by Olmsted, Olmsted & Eliot. Sewerage and water systems were also laid. To complete the design there is yet needed a fence and the apparatus for the gymnasium ground, as well as buildings for shelter and sanitary arrangements. The grounds were much used last summer for ball playing and other games, and arrangements were made for flooding for winter skating, but, on account of the mild season and the porous nature of the ground, great difficulty was experienced in maintaining good ice.

(b.) *Commonwealth Playground.* — Containing about twelve acres, near Bullock and Anchor streets. (In charge of the Public Grounds Department.) The temporary use of this ground, which is the property of the Commonwealth, is given to the city, but as this section will be a warehouse district, it will not be a proper place for a playground. When this development takes place, the marshes at the head of "Old Harbor," lately taken by this department for the Strandway, would furnish a suitable location for another playground for the South Boston District.

(c.) *Castle Island* furnishes a delightful playground, particularly for little children.

ROXBURY, JAMAICA PLAIN AND DORCHESTER.

(a.) *Washington Park.* — Dale and Bainbridge streets; containing nine acres. (In charge of the Public Grounds Department.) Could be arranged so as to be made available for a playground.

(b.) *Franklin Park.* — The Playstead and Glade furnish grounds for ball and other games, open to children not over twelve years of age; besides which there are tennis courts and golf links in the Country Park; the whole comprising about 125 acres.

(c.) *Franklin Field*. — Containing seventy-seven acres. Forty acres are in playground, and are flooded in winter for skating.

(d.) *Dorchester Park*. — Containing twenty-six acres of forest land. The city ledge lot adjoining can be converted into a playground after the stone has been removed.

(e.) *Neponset Playground*. — Containing eighteen acres of salt marsh, lying between Neponset avenue and the Old Colony Railroad. A dam with tidal gate has been built to keep out the tide-water, and, by the construction of an open ditch on the northerly border of the field, the laying of tile drains, and the filling of the creeks and ditches, will make the ground available for temporary use as a playground, until it can be filled and properly surfaced. An embankment was thrown up and the enclosure flooded for skating this winter, which was enjoyed by thousands. The mild season, however, prevented a long continuance of this sport.

(*f.) *Christopher Gibson Playground*. — Dorchester avenue and Park street. This playground, containing six acres, was known as "Dorchester Town Field," and belonged to the city as Trustee of the Gibson School Fund. The recent extension of Geneva avenue divided the field into two parts. Although a part of the land is considerably below the grade of the adjoining streets, both of the lots can be used in their present condition for ball and similar games.

WEST ROXBURY.

Billings Field. — This playground is located between Bellevue and La Grange streets in West Roxbury, and contains eleven acres. Part of the ground is a steep slope, running off to a stretch of bog land. A fill of sixteen to eighteen inches will be necessary on the low ground. The work of grading has commenced by the purchase of surplus excavation from contractors of the railroad grade crossing operations near by, and a plan for the drainage of this playground is under consideration. A portion of this ground was flooded the past winter and used for skating, with good results considering the unfavorable season.

BRIGHTON.

(a.) *North Brighton Playground*. — Western avenue and North Harvard street. This playground contains fourteen acres, about three acres of which are above tide-water, the remainder being subject to the overflow of high tides. No work has been done on it except to grade the high ground

for temporary use as a playground. Filling is now being received on the low ground, and a plan of drainage is being prepared. Plans for a fence have also been made, and estimates for its construction received.

(b.) *Rogers Park*.—Foster and Lake streets; containing seven acres. (In charge of the Public Grounds Department.) About four acres of this park is low land, which can be drained and made available for a playground. A considerable area of similar lands adjoining could be added to make a large playground in this central location.

MAINTENANCE.

The subject of park maintenance is one to be closely considered in connection with every plan for improvement. The Boston Park System, covering as it does a large territory, with numbers of small, detached parks and playgrounds, is necessarily a costly one to maintain, and every acre of ground improved, every foot of road or walk constructed, or each building erected, adds to the cost of maintenance. One of the main considerations should be to so construct or improve as to entail the least possible cost for this service. Landscape effects should be simple, the planting should be of the character that needs the least care; walks and roads built only where necessary as a means to an end, and buildings erected only of substantial materials and simple design, all, however, constructed on the best known methods, for cheapness of construction is not generally conducive to inexpensive maintenance.

The amount credited to us last year on this account was inadequate for maintaining a high degree of excellence, and if not substantially increased for the present season, with the roads, walks, plantations, and playgrounds added since, it will be beyond the energy and skill of the department to maintain a presentable appearance throughout the system.

Respectfully submitted.

J. A. PETTIGREW,

Superintendent.

BOSTON, January 31, 1898.

Attendance at Park Department Gymnasiums for Twelve Months, ending January 31, 1898.

	Attendance.	Lockers Used.	Baths Taken.	Men's, Women's and Girls' Classes.
Charlesbank — Men's Gymnasium.....	188,956	11,359	17,772	—
Charlesbank — Women's and Girl's Gymnasium.....	71,632	.....	3,264	2,307
Wood Island Park — Men's Gymnasium.....	118,942	10,564	10,193	—
Paris street, East Boston — In-door Gymnasium.....	63,095	45,418	48,302	53,897
Total.....	442,625	67,341	79,531	56,204

ENGINEER'S REPORT.

MR. J. A. PETTIGREW,

Superintendent of Parks:

DEAR SIR: I herewith submit the following statement of the principal work done in the several parks (not including the planting) for the year ending January 31, 1898:

COMMONWEALTH AVENUE.

Walks resurfaced (cinders) . . . 6,200 square yards

THE FENS.

New curbstone set	30 linear feet.
Curbstone reset	225 linear feet.
Gutters repaved	113 square yards.
Driveways resurfaced (macadam)	570 square yards.
Catch-basins built	1
Drain-pipe laid (8-inch)	93.0 linear feet.
Boundary fence built (wooden)	935 linear feet.

RIVERWAY.

New curbstone set	26 linear feet.
Gutters paved	10 square yards.
Gutters repaved	610 square yards.
Driveways surfaced (macadam)	2,200 square yards.
Driveways resurfaced (macadam)	2,600 square yards.
Boundary fence built (wooden)	1,505 linear feet.

LEVERETT PARK.

Gutters repaved	133 square yards.
Driveways resurfaced (macadam)	533 square yards.
Drain pipe laid:	
8-inch	407 linear feet.
4-inch	60 linear feet.
Water-pipe laid (2-inch)	150 linear feet.
Drinking-fountains erected	1
Ground ploughed and prepared for planting	9 acres.
Loam bought and spread on plantations	1,100 cubic yards.

JAMAICA PARK.

Driveways graded	8,300 square yards.
Driveways ballasted	900 square yards.
Walks graded and surfaced (cinders) .	1,080 square yards.
Drain-pipe laid (8-inch)	60 linear feet.
Culvert built ($4\frac{1}{2}$ feet by $4\frac{1}{2}$ feet) .	50 linear feet.
Electric light cable laid	11,077 linear feet.
Electric lamp-posts erected	19
Retaining-wall built	555 linear feet.
Loam bought and spread on plantations	4,200 cubic yards.

ARBORWAY.

Gutters paved	1,829 square yards.
Gutters repaved	394 square yards.
Driveways surfaced (macadam), 1.1 miles	18,800 square yards.
Driveways resurfaced (macadam) . .	2,100 square yards.
Driveways graded	5,000 square yards.
Driveways ballasted	6,000 square yards.
Bridle-path graded and surfaced . .	1,300 square yards.
Walks surfaced (cinders and macadam), 1.5 miles	11,400 square yards.
Drain-pipe laid :	
15-inch	233 linear feet.
12-inch	507 linear feet.
10-inch	34 linear feet.
8-inch	725 linear feet.
6-inch	675 linear feet.
4-inch	181 linear feet.
$1\frac{1}{2}$ -inch	1,200 linear feet.
Manholes built	3
Catch-basins built	10
Boundary wall built	3,240 linear feet.
Electric light cable laid	1,225 linear feet.
Electric lamp-posts erected	3
Water-pipe laid (10-inch)	940 linear feet.
Loam bought and spread on plantations	4,854 cubic yards.
Railroad viaduct at Forest Hills completed.	

ARNOLD ARBORETUM AND BUSSEY PARK.

Gutters repaved	185 square yards.
Driveways resurfaced (macadam) . .	672 square yards.
Driveways graded (1 mile)	1,700 square yards.
Driveways ballasted	1,200 square yards.

Walks graded (0.7 mile)	2,500 square yards.
Walks ballasted	1,900 square yards.
Drain-pipe laid:	
18-inch	9 linear feet.
12-inch	50 linear feet.
10-inch	596 linear feet.
8-inch	1,055 linear feet.
6-inch	711 linear feet.
4-inch	133 linear feet.
1½-inch	840 linear feet.
Catch-basins built	19 linear feet.
Water-pipe laid (2-inch)	190 linear feet.

FRANKLIN PARK.

Gutters paved	584 square yards.
Driveways surfaced (macadam)	590 square yards.
Driveways graded and ballasted	1,100 square yards.
Walks surfaced (cinders and macadam),	3,120 square yards.
Catch-basins built	2
Drain-pipe laid (8-inch)	275 linear feet.
Water-pipe laid (2-inch)	100 linear feet.
Drinking-fountains erected	2
Horse watering trough erected	1
Electric light cable laid	1,900 linear feet.
Electric lamp-posts erected	5
Ground ploughed and prepared for planting	29 acres.
Loam bought and spread on plantations	2,885 cubic yards.

FRANKLIN FIELD.

Manholes built	2
Sewer built (8-inch)	746 linear feet.
Water-pipe laid (2-inch)	1,000 linear feet.
Temporary buildings erected	2

DORCHESTER PARK.

Shelter built	1
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FELLOWS-STREET PLAYGROUND.

Catch-basins built	2
Drain-pipe laid (8-inch)	191 linear feet.
Filling deposited in place	1,946 cubic yards.

FIRST-STREET PLAYGROUND.

Walks graded and surfaced, 0.6 mile	4,200 square yards.
Drain-pipe laid:	
10-inch	342 linear feet.
8-inch	427 linear feet.
Manholes built	1
Catch-basins built	5
Water-pipe laid:	
6-inch	407 linear feet.
4-inch	579 linear feet.
Filling deposited in place	2,820 cubic yards.

DORCHESTERWAY.

Driveways surfaced (macadam)	1,070 square yards.
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STRANDWAY.

Sea-wall built	560 linear feet.
Filling deposited in place	163,000 cubic yards.
Loam piled.	3,800 cubic yards.

WOOD ISLAND PARK.

Walks surfaced (macadam, 1.2 miles)	9,400 square yards.
Catch-basins built	1
Drain-pipe laid:	
8-inch	435 linear feet.
2-inch	1,250 linear feet.
Water-pipe laid (2-inch)	490 linear feet.
Ground ploughed and prepared for planting	8 acres.

COPP'S HILL TERRACES.

Walks surfaced (artificial stone)	1,132 square yards.
Granite stairways built	132 square yards.
Boundary and retaining-walls built	1,135 linear feet.
Catch-basins built	3
Drain-pipe laid (8-inch)	176 linear feet.
Water-pipe laid:	
2-inch	354 linear feet.
1-inch	50 linear feet.
Lawn hydrants placed	4
Drinking-fountains placed	1
Electric light cable laid	580 linear feet.
Electric lamp-posts erected	2

NORTH END BEACH.

Manholes built	2
Sewer built (8-inch)	326 linear feet.
Retaining-wall built	225 linear feet.
Wooden pier at women's bath-house	6,400 square feet.
Wooden pier at men's bath-house	25,600 square feet.
Buildings erected	2
Band stand erected	1

Respectfully,

C. E. PUTNAM,

Engineer.



LONGWOOD BRIDGE, RIVERWAY.

CITY ENGINEER'S REPORT.

CITY OF BOSTON, ENGINEERING DEPARTMENT,
50 CITY HALL, January 31, 1898.

MR. CHARLES E. STRATTON, *Chairman, Board of Park Commissioners :*

SIR: I herewith submit the following report of the work done, and of the matters of interest in connection with the work placed under my direction by your Board, the work being under the immediate charge of Assistant Engineer E. W. Howe.

RIVERWAY.

Plans were prepared during the early part of the year by Mr. A. H. French, engineer of the town of Brookline, in consultation with this department, for building the bridge on Longwood avenue. The construction of the bridge is now in progress.

JAMAICA PARK.

The work of grading the drive and adjoining grounds on the westerly side of the pond under a contract with F. A. Snow, dated December 14, 1896, was completed in the autumn. The total payments under the contract were \$7,584.60.

Five hundred and fifty-five linear feet of wall for supporting the drive and the slope above it were built by the Park Department force.

The Metropolitan Water Board has laid a 48-inch water-pipe through this drive from Perkins street to the Arborway.

The pumps and boilers at the pumping-station were repaired in the spring, the mains from the pumps to the reservoir on Franklin Park have all been laid, and the reservoir is now ready for use. It will be necessary to erect and connect the water-posts with the main pipe before the water from this source can be used for watering the roads.

ARBORWAY.

The wall built under a contract with Thomas F. Broderick, dated December 1, 1896, was finished on July 15, at a cost of \$5,670.

On June 21, a contract was made with John A. Whittemore's Sons for building a wall on the line between the

Parkway and the grounds of the Bussey Institution; this work was completed on October 2, at a cost of \$2,389.50.

ARNOLD ARBORETUM AND BUSSEY PARK.

The work of grading the road on the northerly side of Peters' Hill from the junction of Bussey and South streets to the junction of Bussey and Walter streets, under a contract with James Doonan, dated October 5, 1896, was completed on September 28; the amount of the final estimate was \$7,388.57.

A plan was made of the land to be taken for an entrance to the Arboretum from Fairview street.

FRANKLIN PARK.

The drains from the carriage shelter at the Refectory have been finished and underground wires laid and lamps erected for the lighting of the section of the Park between the entrance opposite Columbia street and the Refectory.

STRANDWAY.

In June a plan was made of the land afterwards taken for park purposes between the Strandway and the Old Colony Division of the New York, New Haven and Hartford Railroad.

The work of filling, under a contract with Hugh Farrell, dated October 19, 1896, was continued during the year.

The extensions of the storm overflow sewers at I and N streets have been completed, at a cost of \$1,618.70 for the former, and of \$2,887.50 for the latter.

Work under a contract with Jones & Meehan, dated June 4, 1896, for building a wall and grading between O street and Marine Park was continued until June 29, when the work was taken possession of by the Park Commissioners and bids were advertised for finishing the work. On July 26, a contract was made with Simon J. Donovan for completing the work, which work is now in progress.

MARINE PARK.

During the summer it was discovered that a cast-iron section in each of six of the columns supporting the iron pier had cracked vertically; the cracks in each case are in a single section of a column between high and low water; they were probably caused by the freezing of water which had in some way leaked into the column and filled the space between the iron and the concrete. The cracks will cause no injury to the

structure except in appearance. A report was made to the Superintendent of Parks recommending that the cracks be filled by calking them with a mixture of sal-ammoniac and iron filings. This method had been followed successfully in the case of two of the columns which cracked soon after the pier was built.

NORTH END BEACH.

The sea-wall for supporting the approach to the westerly pier, built under a contract with William L. Miller, was completed on May 20, at a cost of \$8,358.95.

On February 19, a contract was made with Alexander McInnis for building two promenade and bath-house piers. This work was finished on November 20, at a cost of \$31,090.35. The westerly pier is located with its outer line five feet back from the Harbor Commissioners' line; it is fifty feet in width and extends from the line dividing the park property from that of the Street Department, easterly, a distance of 442 feet, the easterly end being semi-circular in plan. The pier has two floors and the upper floor is covered by a roof for a length of 100 feet at the outer or easterly end. Connection is made with the shore by separate approaches to both floors at the westerly end, each approach starting from the abutment at grade 21 above city base. The approaches are each 19 feet wide and about 90 feet long.

The work included the building of the pier for the foundation of the men's bath-house, which is built parallel to the division line between the Park and Street Department properties; the portion of the pier next to the shore for a width of 19 feet and a length of 60 feet has the floor at grade 18 and is covered by the main building; the remaining portion is 15 feet 6 inches wide and 168 feet long.

A fender-guard was built on the property line and also along the Harbor Commissioners' line to and around the curved end of the pier.

The approach to the water from the bath-house is by a passageway under the shore end of the approaches to the promenade pier, to a platform from which inclines extend to the beach, one towards the shore to about high-water line and the other towards the water to about mean low-water.

The easterly pier extends from the wall built in 1896 parallel with and 7 feet 8 inches from the division line between the Park property and that of Fiske's wharf; it is 20 feet in width and 322 feet in length; it has but one floor, but is built of sufficient strength to support a second floor

if it shall be found desirable in the future; the pier is covered by a roof except for a length of 45 feet at the shore end; a fender-guard was built on the property line and around the end of the pier.

Both piers are of wood, the piles and spur-shores being of oak; the caps, stringers and floor plank are of hard pine, all surfaces exposed to view being planed. The roofs are supported by hard pine posts, girders and rafters with spruce purlins and boarding all planed; the roofs are covered with canvas, well painted. The hard pine is finished in oil and the spruce is painted.

On September 10 a contract was made with the James Russell Boiler Works Company for building iron railings on both of the piers and on the masonry approaches to them. This work was completed on December 31, at a cost of \$3,678. The railing is 3 feet 6 inches high; the posts are of cast-iron about 13 feet 6 inches apart on centres, every alternate post on the uncovered portion of the piers being a lamp-post; there are two rails of 2½-inch wrought-iron pipe with ¾-inch round wrought-iron palings between the rails. The total length of the railing is 2,978 feet.

A wooden approach from the women's bath-house to the beach was built in June; this is similar to the approach from the men's bath-house.

Drains were built connecting the two bath-houses with the sewer in Commercial street.

COPP'S HILL TERRACES.

The work being done under a contract with Perkins & White, dated September 16, 1896, was finished on September 24, 1897. The total payments under the contract were \$24,606.57. This work consisted of the doing of all grading and loaming, the building of all walls, drains and artificial stone walks on this park. Electric wires for lighting have been laid in conduits, and two posts for arc lamps have been erected. A drinking-fountain has been placed on the upper terrace. This park is now completed with the exception of the planting.

FIRST-STREET PLAYGROUND.

This ground was cleared and graded early in the year and the surplus loam was carted to the Strandway and stored for use there.

FELLOWS-STREET PLAYGROUND.

Drains and catch-basins for this ground were built in the spring, and the land taken for an extension of the playground has been filled to the grade of the adjoining streets.

NEPONSET PLAYGROUND.

The work of construction done here consisted of the building of a bulkhead with tide-gates on the easterly side of Tenean street, across the creek which drains this territory. This allows a free outlet for the water from the playground, but prevents the tide-water from backing up on to it.

Yours respectfully,

WILLIAM JACKSON,
City Engineer.

FINANCIAL STATEMENTS.

I.

*Expenditures for Land, Construction and Maintenance from
February 1, 1897, to January 31, 1898.*

PARKS.	Page.	Land.	Construc- tion.	Mainte- nance.	Totals.
Main Park System:					
Commonwealth avenue.....	35	.....	\$672 35	\$14,660 78	\$15,333 13
Fens.....	35	.....	3,190 07	13,591 23	16,781 30
Riverway	36	.....	27,791 21	7,591 64	35,382 85
Leverett Park.	37	.....	5,223 74	7,059 78	12,283 52
Jamaica Park.....	38	.....	30,606 46	9,439 23	40,045 69
Arborway	39	.....	163,903 94	4,765 07	168,669 01
Arnold Arboretum.....	40	.....	32,199 08	2,736 42	34,935 50
West Roxbury Parkway..	40	.....	1,355 16	31 59	1,386 75
Franklin Park	41	.....	55,081 13	32,514 17	87,595 30
Marine Park System:					
Dorchesterway	42	.....	3,938 80	399 22	4,338 02
Strandway	43	\$86,000 00	*111,576 61	.....	197,576 61
Marine Park	43	.....	1,805 25	5,787 29	7,592 54
Wood Island Park	44	.....	8,229 48	6,324 05	14,553 53
Charlesbank	45	.....	2 00	11,526 99	11,528 99
Charlestown Heights.....	46	.....	810 13	2,288 44	3,098 57
Charlestown Playground....	46	.....	739 16	63 63	802 79
Dorchester Park.....	46	.....	977 57	102 50	1,080 07
Franklin Field.....	47	1,530 36	4,847 84	2,211 49	8,589 69
Public park, North End....	48	180 00	124,579 99	5,951 18	130,711 17
North Brighton Playground,	49	272 10	3,095 68	.....	3,367 78
Neponset Playground.....	50	1,264 66	963 32	222 36	2,450 34
Billings field.....	50	418 75	18 50	310 28	747 53
First-street Playground....	51	.....	9,554 85	488 75	10,043 60
Freeport-street Triangle...	51	4,000 00	.....	.....	4,000 00
North-End Playground	51	99,228 95	.....	167 52	99,396 47
Mystic Playground.....	52	50,000 00	.....	2,156 11	52,156 11
Fellows-street Playground..	52	14,503 72	496 28	152 47	15,152 47
Christopher Gibson Play- ground.....	52	37,500 00	.....	7 00	37,507 00
Paris-street Gymnasium	52	.....	.....	4,713 89	4,713 89
Office expenses.....	52	.....	.....	8,254 13	8,254 13
Totals.....	..	\$294,898 54	\$591,658 60	\$143,517 21	\$1,030,074 35

* The sum of \$271.23 drawn for, but not yet paid by Auditor.

II.

Expenditures of the Department in detail from February 1, 1897, to January 31, 1898.

COMMONWEALTH AVENUE.

CONSTRUCTION.

Roadways, Gutters and Drainage.

Roads and walks: labor and materials	\$573 35	
Engineers and expenses	99 00	
		\$672 35

MAINTENANCE.

Roadways, Grounds and Drainage.

Roads and walks: labor and materials	\$12,109 13	
Grounds: labor and expenses	1,515 84	
Stable account	1,000 00	
Drainage	25 56	
Bridge	10 25	
		14,660 78
		\$15,333 13

FENS.

CONSTRUCTION.

Plantations.

Labor and expenses	\$1,916 26
------------------------------	------------

Grading, Loam and General Work.

Grading: labor and materials	\$313 72	
Fence: labor and materials, ...	216 41	
Engineers and expenses	112 75	
		642 88

Roadways, Gutters and Drainage.

Roads and walks: labor and materials	\$463 27	
Drainage: labor and materials	111 93	
		575 20

Plans and Designs.

Landscape architects and expenses, ...	55 73	
		\$3,190 07

MAINTENANCE.

Roadways, Grounds, Buildings and Drainage.

Roads and walks: labor and materials	\$8,533 35	
Grounds: labor and materials	2,728 39	
<i>Amounts carried forward,</i>	\$11,261 74	\$3,190 07
		\$15,333 13

<i>Amounts brought forward,</i>	\$11,261 74	\$3,190 07	\$15,333 13
Stable account	1,000 00		
Live stock	429 50		
Sewer assessment	312 90		
Drainage: labor and materials . .	186 01		
General work: labor and materials,	173 22		
Beacon entrance bridge: labor and			
materials	159 86		
Buildings: labor and materials .	64 50		
Engineers and expenses	3 50		
		13,591 23	
			16,781 30

RIVERWAY.

CONSTRUCTION.

Longwood Avenue Bridge.

Amount paid under con-	
tract	\$15,198 96
Rutan, Shepley & Coolidge,	
architects commission .	1,437 50
Engineers and expenses .	882 81
Labor and materials .	333 76
Advertising contract .	91 54
	\$17,944 57

Roadways, Gutters and Drainage.

Roads and walks: labor	
and materials	\$4,364 79
Gutters: labor and mate-	
rials	690 18
Drainage: labor and mate-	
rials	14 67
	5,069 64

Plantations.

Labor and expenses	2,909 66
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Grading, Loam and General Work.

Grading: labor and mate-	
rials	\$659 51
Loam: labor and mate-	
rials	512 26
Superintendence and gen-	
eral work	278 05
Engineers and expenses .	217 06
Fence: labor and mate-	
rials	195 78
	1,862 66

Plans and Designs.

Landscape architects and expenses,	4 68
	\$27,791 21

MAINTENANCE.

Roadways, Grounds, Buildings and Drainage.

Roads and walks: labor and mate-	
rials	\$3,271 97
Buildings: labor and materials .	1,734 58
<i>Amounts carried forward,</i>	\$5,006 55
	\$27,791 21
	\$32,114 43

<i>Amounts brought forward,</i>	\$5,006 55	\$27,791 21	\$32,114 43
Grounds: labor and materials . . .	1,239 55		
Stable account	1,000 00		
Audubon road bridge: labor and materials	180 73		
General work: labor and materials, ...	122 39		
Drainage: labor and materials	42 42		
		7,591 64	
			35,382 85

LEVERETT PARK.

CONSTRUCTION.

Plantations.

Labor and expenses	\$2,635 38		
<i>Grading, Loam and General Work.</i>			
Loam	\$825 68		
Grading: labor and materials	563 14		
General work: labor and materials	167 00		
Engineers and expenses	122 81		
		1,678 63	

Roadways, Gutters and Drainage.

Drainage: labor and materials	\$154 98		
Roads and walks: labor and materials	94 94		
		249 92	

Lawns and Woods.

Labor and materials	308 01		
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Water Supply.

Water-pipes and labor	224 96		
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Machinery, Tools and Implements.

Pumping-station	63 18		
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Fountains.

Water fountain	35 00		
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Boating Service.

Labor and materials	28 66		
		\$5,223 74	

MAINTENANCE.

Roadways, Grounds, Buildings and Drainage.

Grounds: labor and materials	\$3,247 46		
Roads and walks: labor and materials	2,595 56		
Stable account	981 67		
Buildings: labor and materials	107 31		
Drainage: labor and materials	81 94		
General work: labor and materials, ...	40 84		
Boating service	5 00		
		7,059 78	
			12,283 52

Amount carried forward,

\$79,780 80

Amount brought forward,

\$79,780 80

JAMAICA PARK.

CONSTRUCTION.

Grading, Loam and General Work.

Grading: amount paid under contract . . .	\$7,584 60
Loam	2,588 41
Engineers and expenses . .	2,284 58
Grading: labor and materials	2,208 36
General work: labor and materials	2,104 15
	\$16,770 10

Retaining Walls.

Labor and materials	6,563 23
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Pine Bank House.

Alterations and additions: amount paid under contract	\$1,597 84
Labor and furnishing	801 71
Wheelwright and Haven for superintendence	214 90
	2,614 45

Plantations.

Labor and expenses	1,521 51
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Lawns and Woods.

Labor and materials	1,408 74
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Roadways, Gutters and Drainage.

Roads and walks: labor and materials	\$1,129 50
Drainage: labor and materials	48 14
Gutters: labor and materials	43 22
	1,220 86

Boating Service.

Architects for plans	\$140 45
Labor and materials	44 93
Advertising contract	41 25
	226 63

Machinery, Tools and Implements.

Lawn mowers and ice tools	209 57
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Plans and Designs.

Landscape architects and expenses	71 37
	\$30,606 46

MAINTENANCE.

Roadways, Grounds, Buildings and Drainage.

Buildings: labor and materials	\$3,258 95
Roads and walks: labor and materials, ...	2,125 12
Skating: labor and materials	1,545 62
Grounds: labor and materials	1,357 56
General work: labor and materials, ...	1,091 10
Boating service	48 00
Drainage: labor and materials	12 88
	9,439 23
	40,045 69

Amount carried forward,

\$119,826 49

PARK DEPARTMENT.

39

Amount brought forward,

\$119,826 49

ARBORWAY.

CONSTRUCTION.

Roadways, Gutters and Drainage.

Roads and walks: labor and materials . . .	\$70,471 91
Drainage: labor and materials . . .	2,283 49
Gutters, labor and materials . . .	1,990 11
	\$74,745 51

Arches.

Amount paid N. Y., N. H. & H. Railroad Co. . .	\$63,188 71
Shepley, Rutan & Coolidge, architects . . .	1,442 86
	64,631 57

Grading, Loam and General Work.

General work: labor and materials . . .	\$3,758 31
Loam . . .	3,641 21
Grading: labor and materials . . .	3,328 34
Engineers and expenses . . .	1,550 40
	12,278 26

Plantations.

Labor and expenses . . .	5,834 37
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Water Supply.

Water-pipes and labor . . .	3,632 84
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Walls.

Amount paid under contract . . .	\$2,389 50
Labor and materials . . .	341 53
Advertising contract . . .	34 00
	2,765 03

Plans and Designs.

Landscape architects and expenses . . .	12 02
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Lawns and Woods.

Labor and materials . . .	4 34
	\$163,903 94

MAINTENANCE.

Roadways, Grounds, Buildings and Drainage.

Roads and walks: labor and materials . . .	\$4,127 20
Grounds: labor and materials . . .	523 36
Stony Brook bridge: labor and materials . . .	65 05
Drainage: labor and materials . . .	36 94
General work: labor and materials . . .	12 52
	4,765 07
	168,669 01

Amount carried forward,

\$288,495 50

Amount brought forward,

\$288,495 50

ARNOLD ARBORETUM AND BUSSEY PARK.

CONSTRUCTION.

Roadways, Gutters and Drainage.

Roads and walks: labor	
and materials	\$11,467 93
Drainage: labor and materials	2,192 09
	\$13,660 02

Grading, Loam and General Work.

Grading: amount paid	
under contract	\$6,689 07
Engineers and expenses	3,178 62
Labor and materials	2,536 06
General work: labor and materials	15 74
	12,419 49

Boundary Walls and Gateways.

Amount paid under contract	\$5,670 00
Advertising and printing, ...	26 15
	5,696 15

Machinery, Tools and Implements.

Crusher plant	283 15
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Plans and Designs.

Landscape architects and expenses	61 80
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Water Supply.

Water-pipes	34 47
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Plantations.

Labor and expenses	26 00
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Lawns and Woods.

Labor	18 00
	\$32,199 08

MAINTENANCE.

Roadways, Grounds and Drainage.

Roads and walks: labor and materials	\$2,356 75
Drainage: labor and materials	205 16
Grounds: labor and materials	89 17
General work	85 34
	2,736 42
	34,935 50

WEST ROXBURY PARKWAY.

CONSTRUCTION.

Plantations.

Labor and expenses	\$1,156 96
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Grading and General Work.

Engineers and expenses	165 16
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Amounts carried forward,

\$1,322 12

\$323,431 00

PARK DEPARTMENT.

41

Amounts brought forward, \$1,322 12 \$323,431 00

Plans and Designs.

Landscape architects and expenses . 33 04
 ————— \$1,355 16

MAINTENANCE.

Grounds and Buildings.

Buildings: labor \$24 84
 General work 6 75
 ————— 31 59
 ————— 1,386 75

FRANKLIN PARK.

CONSTRUCTION.

Plantations.

Labor and expenses \$17,041 43

Grading, Loam, Drainage and General Work.

Grading: labor and materials \$5,357 17
 General work: labor and materials 4,594 08
 Loam 2,164 00
 Engineers and expenses . 987 58
 Drainage: labor and materials 919 28
 ————— 14,022 11

Carriage Sheds.

Amount paid under contract \$6,423 00
 Paving: labor and materials 894 33
 Water fountain 255 80
 Plumbing: amount paid under contract 232 00
 ————— 7,805 13

Refectory Building.

Amount paid under contract \$3,652 88
 Amount paid under contract for soda fountain booth 1,118 00
 Labor and materials 467 33
 ————— 5,238 21

Roadways and Gutters.

Roads and walks: labor and materials \$4,509 87
 Gutters: labor and materials 434 64
 ————— 4,944 51

Lawns and Woods.

Labor and materials 2,531 27

Plans and Designs.

Landscape architects and expenses \$922 50
 —————
Amounts carried forward, \$922 50 \$51,582 66 \$324,817 75

<i>Amounts brought forward,</i>	\$922 50	\$51,582 66	\$324,817 75
Public Buildings Department, Architects' Division for plans of sheepfold	278 75		
Architects, for preliminary plans, Abbotswood Cottage	50 00		
		1,251 25	
<i>Water Supply.</i>			
Water-pipes and labor	1,040 18		
<i>Electric Lights.</i>			
Lamp-posts and cable	491 25		
<i>Duck House.</i>			
Labor and materials	247 12		
<i>Walls and Steps, Refectory Hill.</i>			
Labor and materials	226 00		
<i>Park Wall and Gateways.</i>			
Labor and materials	146 47		
<i>Machinery, Tools and Implements.</i>			
Lawn-mower	45 20		
<i>Fountains.</i>			
Water fountain	35 00		
<i>Boating Service.</i>			
Labor and materials	16 00		
		\$55,081 13	

MAINTENANCE.

Roadways, Grounds, Buildings and Drainage.

Grounds	\$11,580 33		
Roads and walks: labor and materials	10,811 91		
Buildings: labor and materials	5,618 72		
Sheep-fold	1,974 20		
General work	1,529 84		
Live stock	547 54		
Drainage	449 13		
Engineer's expenses	2 50		
		32,514 17	
			87,595 30

DORCHESTERWAY.

CONSTRUCTION.

Roadways, Gutters and Drainage.

Roads and walks: labor and materials	\$3,399 49		
Gutters: labor and materials	18 50		
		\$3,417 99	
<i>Amounts carried forward,</i>	\$3,417 99	\$412,413 05	

Amounts brought forward, \$3,417 99 \$412,413 05

Grading, Loam and General Work.

General work: labor and materials	\$80 25		
Engineers and expenses . .	11 29		
Grading: labor and materials	429 27		
		520 81	
			\$3,938 80

MAINTENANCE.

Roadways, Grounds, Buildings and Drainage.

Roads and walks: labor and materials	\$347 97		
Grounds: labor and materials . .	51 25		
		399 22	
			4,338 02

STRANDWAY.

LAND.

Amount paid for land \$86,000 00

CONSTRUCTION.

Filling.

Amount paid under contract . . \$50,412 91

Sea-wall and Grading.

Amount paid under contract	\$46,102 40	
Advertising contract . .	91 71	
		46,194 11

Grading, Loam and General Work.

Engineers and expenses .	\$8,214 58	
Loam: amount paid under contract	1,663 79	
Grading: labor and materials	427 73	
General work: labor and materials	286 01	
		10,592 11

Drainage.

N-street sewer: amount paid under contract .	\$2,757 00		
I-street sewer: amount paid under contract .	1,618 70		
Labor	1 78		
		4,377 48	
			111,576 61
			197,576 61

MARINE PARK.

CONSTRUCTION.

Head-House.

Amount paid under contract . .	\$393 60	
<i>Amounts carried forward,</i>	\$393 60	\$614,327 68

Amounts brought forward, \$393 60 \$614,327 68

Plantations.

Labor and expenses 319 04

Grading, Loam and General Work.

Engineers and expenses . \$52 95

Loam 62 34

General work: labor and materials 30 34

145 63

Machinery, Tools and Implements.

Lawn-mowers 38 00

Lawns and Woods.

Labor and materials 35 55

\$931 82

CASTLE ISLAND.

Temporary Structures.

Shelter: labor and materials \$272 47

Fence: labor and materials . 265 75

\$538 22

Plantations.

Labor and expenses 306 02

Grading, Loam and General Work.

General work: labor and materials \$23 00

Grading: labor and materials 6 19

29 19

873 43

1,805 25

MAINTENANCE.

Roadways, Grounds, Walks, Buildings and Drainage.

Grounds: labor and expenses . . \$2,627 10

Buildings: labor and expenses . . 1,855 90

Roads and walks: labor and materials 692 55

General work: labor and materials . 590 40

Drainage: labor and materials . . 10 48

Castle Island Bridge 10 86

5,787 29

7,592 54

WOOD ISLAND PARK.

CONSTRUCTION.

Roadways, Gutters and Drainage.

Drainage: labor and materials \$355 25

Roads and walks: labor and materials 4,975 83

\$5,331 08

Amounts carried forward, \$5,331 08

\$621,920 22

Amounts brought forward, \$5,331 08 \$621,920 22

Grading, Loam and General Work.

Grading: labor and materials . . . \$1,267 09
 Engineers and expenses . . . 102 24
 General work: labor and materials . . . 14 43
 ————— 1,383 76

Plantations.

Labor and expenses . . . 1,107 82

Tool-house.

Labor and materials . . . 196 04

Water Supply.

Water-pipes and labor . . . 126 23

Machinery, Tools and Implements.

Mower and scythes . . . 42 80

Women's Bath-house.

Insurance . . . 37 50

Lawns and Woods.

Labor and materials . . . 4 25
 ————— \$8,229 48

MAINTENANCE.

Roadways, Grounds and Buildings.

Men's Gymnasium—
 Grounds, apparatus and building: labor and expenses . . . \$4,595 17
 Skating: labor and expenses . . . 837 73
 Grounds: labor and expenses . . . 497 16
 Women's bath-house: labor and expenses . . . 196 63
 General work . . . 187 36
 Roads and walks: labor and materials, . . . 10 00
 ————— 6,324 05
 ————— 14,553 53

CHARLESBANK.

CONSTRUCTION.

Plantations.

Labor and expenses . . . \$2 00

MAINTENANCE.

Grounds, Walks and Buildings.

Men's gymnasium—
 Grounds, apparatus and building: labor and expenses . . . \$3,911 74
 Women's gymnasium—
 Grounds and walks: labor and expenses . . . 2,885 31
 Grounds, apparatus and building: labor and expenses . . . 2,742 14
 Skating: labor and expenses . . . 1,490 10
 General work: labor and expenses . . . 497 70
 ————— 11,526 99
 ————— 11,528 99

Amount carried forward, \$648,002 74

Amount brought forward,

\$648,002 74

CHARLESTOWN HEIGHTS.

CONSTRUCTION.

Retaining Wall.

Amount paid under contract	\$677 51	
Labor and materials	50 00	
		\$727 51

Plantations.

Labor and expenses	53 75
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Water Supply.

Water-pipes and labor	20 33
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Grading, Loam and General Work.

Engineers and expenses	\$5 04	
General work: labor and materials	3 50	
		8 54
		\$810 13

MAINTENANCE.

Grounds, Walks and Buildings.

Grounds and walks: labor and materials	\$861 92	
Sewer assessment	772 30	
Buildings: labor and materials	653 40	
General work: labor and materials	82	
		2,288 44
		3,098 57

CHARLESTOWN PLAYGROUND.

CONSTRUCTION.

Grading, Loam and General Work.

Grading: labor and materials	\$725 38	
Engineers and expenses	12 00	
		\$737 38

Walks, Gutters and Drainage.

Walks: labor	1 78	
		\$739 16

MAINTENANCE.

Grounds, Walks and Buildings.

Grounds and walks: labor	\$39 63	
Buildings: labor	24 00	
		63 63
		802 79

DORCHESTER PARK.

CONSTRUCTION.

Shelter.

Labor and materials	\$963 32	
<i>Amounts carried forward,</i>	\$963 32	\$651,904 10

PARK DEPARTMENT.

47

Amounts brought forward, \$963 32 \$651,904 10

Grading, Loam and General Work.

General work: labor and materials	\$8 00		
Engineers and expenses	6 25		
		14 25	
			\$977 57

MAINTENANCE.

Grounds, Walks and Buildings.

Grounds: labor and materials	\$95 00		
Buildings: labor and materials	7 50		
		102 50	
			1,080 07

FRANKLIN FIELD.

LAND.

Amount paid for land \$1,530 36

CONSTRUCTION.

Buildings.

Sanitary buildings: labor and materials \$2,704 27

Drainage.

Labor and materials 989 21

Plans and Designs.

Architects, for preliminary plans of field-house	\$575 96		
Landscape architects and expenses	62 35		
		638 31	

Grading, Loam and General Work.

Grading: labor and materials	\$220 50		
Engineers and expenses	109 41		
		311 91	

Plantations.

Labor and expenses 153 95

Water Supply.

Water-pipes and labor 46 89

Tools and Implements.

Ice-tools	3 30		
			4,847 84

MAINTENANCE.

Grounds, Walks, Buildings and Drainage.

Skating: labor and expenses	\$1,424 53		
Grounds and walks: labor and materials	727 66		
Buildings: labor	57 05		
Drainage: labor	2 25		
		2,211 49	
			8,589 69

Amount carried forward, \$661,573 86

Amount brought forward,

\$661,573 86

PUBLIC PARK, NORTH END.

NORTH END BEACH.

LAND.

Expenses in trials of suits \$180 00

CONSTRUCTION.

Administration Building and Bathing Establishment.

Administration building and

women's bath-house:

Amount paid under con-

tract. . . . \$33,449 10

Amount paid R. Clipston

Sturgis for plans and super-

intendence 1,788 45

Laundry machinery:

amount paid under con-

tract 1,435 00

Furnishing and labor . . 1,035 60

Labor and materials . . 897 67

Heating: amount paid under

contract 870 00

Advertising contract . . 17 00

Men's bath-house: amount

paid under contract . . 10,070 00

Amount paid R. Clipston

Sturgis for plans and super-

intendence 805 95

Insurance 437 49

Furnishing and labor . . 301 68

Advertising contract . . 50 56

\$51,158 50*Piers.*

Amount paid under con-

tract \$30,990 35

Advertising contract . . 77 30

31,067 65*Walls.*

Westerly wall: amount paid

under contract . . . \$8,358 95

Advertising contract . . 63 78

8,422 73*Grading, Loam and General Work.*

Engineers and expenses . \$3,761 61

Grading: amount paid under

contract 1,745 50

General work 1,288 80

Labor and materials . . 27 44

6,823 35*Iron Railing.*

Amount paid under con-

tract \$3,678 00

Advertising contract . . 20 88

3,698 88*Amounts carried forward,*

\$101,171 11

\$180 00

\$661,573 86

PARK DEPARTMENT.

49

Amounts brought forward, \$101,171 11 \$180 00 \$661,573 86

Walks, Gutters and Drainage.

Drainage: labor and materials	\$1,728 35		
Walks: labor and materials, ...	45 25		
		1,773 60	

Plans and Designs.

Landscape architects and expenses	768 45		
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Band Stand.

Amount paid under contract	\$520 00		
Public Buildings Department, Architect's Division: for plans	51 44		
		571 44	

Borings.

Labor	56 87		
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Plantations.

Labor and expenses	7 50		
		\$104,348 97	

COPP'S HILL TERRACES.

Walls, Grading and Drainage.

Amount paid under contract	\$18,881 02		
Engineers and expenses	1,350 00		
		20,231 02	
		124,579 99	

MAINTENANCE.

Grounds, Buildings and Drainage.

Administration Building and bath-house: labor and materials	\$3,786 44		
Electric wiring and fixtures	1,909 42		
Grounds: labor and materials	203 00		
Skating	26 00		
Walks: labor	17 82		
Men's bath-house: labor	5 00		
Water-supply	3 50		
		5,951 18	
		130,711 17	

NORTH BRIGHTON PLAYGROUND.

LAND.

Surveying and plans	\$272 10		
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CONSTRUCTION.

Filling.

Filling	\$1,668 50		
<i>Amounts carried forward,</i>	\$1,668 50	\$272 10	\$792,285 03

Amounts brought forward, \$1,668 50 \$272 10 \$792,285 03

Grading, Loam and General Work.

Grading: labor and materials . . . \$1,165 82
 Engineers and expenses . . . 123 00
1,288 82

Walks, Gutters and Drainage.

Walks: labor and materials . . . 138 36
3,095 68
 3,367 78

NEPONSET PLAYGROUND.

LAND.

Amount paid for land . . . \$933 50
 Expenses . . . 331 16
\$1,264 66

CONSTRUCTION.

Grading, Loam and General Work.

Grading: labor and materials . . . \$219 25
 Engineers and expenses . . . 58 49
\$277 74

Bulkhead.

Amount paid under contract . . . 533 10

Water Supply.

Water-pipes and labor . . . 152 48
963 32

MAINTENANCE.

Grounds and Walks.

Skating: labor and materials . . . 222 36
2,450 34

BILLINGS FIELD.

LAND.

Expenses . . . \$418 75

CONSTRUCTION.

Grading, Loam and General Work.

Engineers and expenses . . . \$13 75
 Grading . . . 4 75
18 50

MAINTENANCE.

Grounds and Walks.

Skating: labor and materials . . . 310 28
747 53

Amount carried forward, \$798,850 68

Amount brought forward, \$798,850 68

FIRST-STREET PLAYGROUND.

CONSTRUCTION.

Grading, Loam and General Work.

Grading: amount paid under contract	\$2,699 20	
Labor and materials, ...	2,130 98	
Engineers: labor and expenses, ...	389 97	
Loam	60 75	
General work: labor and materials	39 50	
		\$5,320 40

Roadways, Gutters and Drainage.

Roads and walks: labor and materials	\$1,188 36	
Drainage: labor and materials	1,084 05	
		2,272 41

Filling.

Filling	987 28	
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Water Supply.

Water-pipes and labor	912 96	
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Plantations.

Labor and expenses	61 80	
		\$9,554 85

MAINTENANCE.

Grounds and Walks.

Skating: labor and expenses	\$457 58	
Grounds: labor and materials	26 81	
Walks: labor and materials	4 36	
		488 75
		10,043 60

FREEPORT-STREET TRIANGLE.

LAND.

Amount paid for land	4,000 00
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NORTH-END PLAYGROUND.

LAND.

Amount paid for land	\$97,995 95	
Expenses	1,233 00	
		\$99,228 95

MAINTENANCE.

Grounds, and Walks.

Grounds: labor and materials	\$147 77	
Engineers and expenses	19 75	
		167 52
		99,396 47

Amount carried forward, \$912,290 75

Amount brought forward,

\$912,290 75

MYSTIC PLAYGROUND.

LAND.

Amount paid for land \$50,000 00

MAINTENANCE.

Grounds and Walks.

Grounds: labor and material . . . \$2,073 82

Engineers and expenses . . . 78 05

Walks: labor and materials . . . 4 24

2,156 11

52,156 11

FELLOWS-STREET PLAYGROUND.

LAND.

Amount paid for land \$14,200 00

Expenses 303 72

\$14,503 72

CONSTRUCTION.

Grounds and Walks.

Filling 496 28

MAINTENANCE.

Grounds and Walks.

Grounds: materials 152 47

15,152 47

CHRISTOPHER GIBSON PLAYGROUND.

LAND.

Amount paid for land \$37,500 00

MAINTENANCE.

Grounds and Walks.

Engineers and expenses 7 00

37,507 00

PARIS STREET GYMNASIUM.

MAINTENANCE.

Labor and expenses 4,713 89

OFFICE EXPENSES.

MAINTENANCE.

Salary of Secretary and Clerk \$3,000 00

Clerical service at office 1,800 00

Stenographer, telephones and expenses . . . 1,262 47

Furniture and fixtures 743 75

Printing annual report, etc. 683 08

Carriage-hire 384 50

Travelling expenses 232 85

Stationery 147 48

8,254 13

\$1,030,074 35

III.

General Exhibit of Appropriations, 1897-98.

OBJECTS OF APPROPRIATION.	Page.	Balancea January 31, 1897.	Appropriations and Transfers, 1897-98.	Total Credits.	Expenditures 1897-98.	Balancea January 31, 1898.
Public Parks, Land and Construction.....	54	\$449,590 74	\$6,035 63	\$455,626 37	\$406,413 81	\$49,212 56
Strayaway, from Marine Park, west.....	54	262,359 67	.....	262,359 67	169,576 61	92,783 06
Public Park, North End.....	54	89,249 91	.....	89,249 91	89,249 91	
North Brighton Playground.....	55	3,775 37	.....	3,775 37	3,567 78	407 59
Neponset Playground, Land.....	55	14,566 16	.....	14,566 16	1,264 66	13,301 50
Neponset Playground, Construction.....	55	.....	4,500 00	4,500 00	963 32	3,536 68
Billings Field, Land.....	55	20,000 00	.....	20,000 00	418 75	19,581 25
Billings Field, Construction.....	55	.....	2,500 00	2,500 00	18 60	2,481 50
First-street Playground.....	55	.....	5,000 00 4,545 85 9 00	9,554 85	9,554 85	
Freeport-street Triangle.....	55	4,000 00	.....	4,000 00	4,000 00	
North End Playground.....	56	100,000 00	.....	100,000 00	99,228 95	771 05
Mystic Playground.....	56	.....	50,000 00	50,000 00	50,000 00	
Fellows-street Playground.....	56	.....	15,000 00	15,000 00	15,000 00	
Christopher Gibson Playground.....	56	.....	87,500 00	87,500 00	87,500 00	
Park Department, Maintenance.....	56	.....	5,000 00 125,000 00 13,517 21	143,517 21	143,517 21	
		\$943,541 85	\$268,607 69	\$1,212,149 54	\$1,030,074 35	\$182,075 19

IV.

Appropriations and Balances in Detail for the Financial Year 1897-98.

PUBLIC PARKS.

Balance unexpended January 31, 1897	\$149,590 74
Loan issued November 18, 1897	50,000 00
Loan issued January 1, 1898	250,000 00
Amount received from sales of land	5,035 63
Draft withdrawn from City Auditor	1,000 00
	<u>\$455,626 37</u>

Expenditures.

Commonwealth Avenue	\$672 35
Fens	3,190 07
Riverway	27,791 21
Leverett Park	5,223 74
Jamaica Park	30,606 46
Arborway	163,903 94
Arnold Arboretum and Bussey Park	32,199 08
West Roxbury Parkway	1,355 16
Franklin Park	55,081 13
Dorchesterway	3,938 80
Strandway	28,000 00
Marine Park	1,805 25
Wood Island Park	8,229 48
Charlesbank	2 00
Charlestown Heights	810 13
Charlestown Playground	739 16
Dorchester Park	977 57
Franklin Field	6,378 20
Public park, North End	35,510 08
Balance unexpended January 1, 1898	49,212 56
	<u>\$455,626 37</u>

STRANDWAY FROM MARINE PARK WEST.

Balance unexpended January 31, 1897	\$62,359 67
Public Park Loan issued January 31, 1897	200,000 00
	<u>\$262,359 67</u>

Expenditures.

Paid on account of construction	\$111,576 61
Paid on account of land	58,000 00
Balance unexpended, January 31, 1898	92,783 06
	<u>\$262,359 67</u>

PUBLIC PARK, NORTH END.

¹ Public Park Loan, Wards 6 and 7:	
Balance unexpended January 31, 1897	<u>\$89,249 91</u>

¹ Chapter 282, Acts of 1893, authorizes the taking of lands of an assessed value not exceeding \$300,000, and the issue of bonds to an amount necessary to pay for such lands, and a further amount not exceeding \$50,000, to be used to meet the expense of preparing said lands for public use.

Expenditures.

Paid on account of land	\$180 00	
Paid on account of construction	89,069 91	
		<u>\$89,249 91</u>

NORTH BRIGHTON PLAYGROUND.

Balance unexpended January 31, 1897	<u>\$3,775 37</u>
---	-------------------

Expenditures.

Paid on account of land	\$272 10	
Paid on account of construction	3,095 68	
Balance unexpended January 31, 1898	407 59	
		<u>\$3,775 37</u>

NEPONSET PLAYGROUND.

Balance unexpended January 31, 1897	\$14,566 16	
Amount appropriated for construction under general loan, issued October 4, 1897	4,500 00	
		<u>\$19,066 16</u>

Expenditures.

Paid on account of land	\$1,264 66	
Paid on account of construction	963 32	
Balance unexpended January 31, 1898	16,838 18	
		<u>\$19,066 16</u>

BILLINGS FIELD, WEST ROXBURY.

Amount appropriated for land under general loan bill, dated October 22, 1896	\$20,000 00	
Amount appropriated for construction under general loan bill, dated June 18, 1897	2,500 00	
		<u>\$22,500 00</u>

Expenditures.

Paid on account of land	\$418 75	
Paid on account of construction	18 50	
Balance unexpended January 31, 1898	22,062 75	
		<u>\$22,500 00</u>

FIRST-STREET PLAYGROUND.

Amount transferred from public grounds appro- priation	\$4,545 85	
Amount appropriated under general loan bill, dated June 18, 1897	5,000 00	
Amount transferred by City Auditor	9 00	
		<u>\$9,554 85</u>

Expenditures.

Paid on account of construction	<u>\$9,554 85</u>
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FREEPORT-STREET TRIANGLE.

Amount appropriated under general loan bill, dated October 22, 1896, and issued March 27, 1897	<u>\$4,000 00</u>
---	-------------------

Expenditures.

Amount paid for land	<u>\$4,000 00</u>
--------------------------------	-------------------

NORTH END PLAYGROUND.

Amount appropriated under general loan bill, dated October
22, 1896 \$100,000 00

Expenditures.

Paid on account of land \$99,228 95
Balance unexpended January 31, 1898 771 05
_____ \$100,000 00

MYSTIC PLAYGROUND.

Amount appropriated under general loan issued October
27, 1897 \$50,000 00

Expenditures.

Amount paid for land \$50,000 00

FELLOWS-STREET PLAYGROUND.

Amount appropriated under general loan issued October 4,
1897 \$15,000 00

Expenditures.

Amount paid for land \$14,503 72
Amount paid for construction 496 28
_____ \$15,000 00

CHRISTOPHER GIBSON PLAYGROUND.

Amount appropriated under general loan issued November
11, 1897 \$37,500 00

Expenditures.

Amount paid for land \$37,500 00

PARK DEPARTMENT.

MAINTENANCE.

Appropriation for financial year 1897-98 . . . \$125,000 00
Amount transferred by City Auditor . . . 13,517 21
Amount contributed by abutters, Common-
wealth avenue 5,000 00
_____ \$143,517 21

Expenditures.

Paid on account of maintenance as per Exhibit, page 34 . . \$143,517 21

INCOME.

Receipts.

Received from sale of land \$5,035 63
Received from rents, bathing fees, sale of build-
ings, wool, sheep, grass and wood 3,678 30
_____ \$8,713 93

Payments.

Transferred to appropriation for Public Parks . . \$5,035 63
Income carried to General City Income . . . 3,678 30
_____ \$8,713 93

V.

*Summary of Expenditures on Account of Park Construction
from the Organization of the Board, October 8, 1875, to
January 31, 1898.*

MAIN PARK SYSTEM.

COMMONWEALTH AVENUE.

Roadways, sidewalks, gutters, drainage and general work	\$83,911 55	
Plantations	10,252 42	
Electric lighting	5,674 00	
Machinery, tools, etc.	884 90	
Plans and designs	22 90	
		\$100,745 77

FENS.

Filling	\$576,811 15	
Excavating, grading, loam and general work, .	535,716 64	
Roadways, sidewalks, gutters and drainage .	349,301 49	
Retaining-walls, curb and fence	118,177 77	
Boylston bridge	92,011 43	
Plantations	72,301 07	
Charlesgate bridge	65,287 67	
Agassiz bridge	52,013 50	
Stony-brook bridge	40,007 11	
Railroad bridge	39,995 04	
Fen bridge	29,427 80	
Plans, designs and superintendence	27,280 28	
Office and general expenses	14,114 92	
Machinery, tools, etc.	13,797 11	
Electric lighting	6,887 23	
Surveying	5,472 16	
Stony-brook channel and gate-house	1,976 28	
Water-supply, settees and live-stock	1,417 48	
Duck-house	350 00	
Boating service	296 04	
		2,042,642 17

RIVERWAY.

Excavating, grading, loam and general work, .	\$186,429 69	
Filling	104,143 90	
Roadways, sidewalks, gutters and drainage, .	96,595 23	
Audubon bridge	39,654 27	
Bridle-path bridge	32,929 09	
Administration building	26,534 70	
Longwood-avenue bridge	17,944 57	
Plantations	16,381 65	
Footbridges and culverts	14,345 00	
Tremont-street bridge	13,273 53	
Brookline-avenue bridge	8,936 82	
Bellevue-street bridge	8,163 96	
Retaining-wall	7,568 09	
Surveys, plans, designs and superintend- ence	7,196 67	
Shelter	4,513 65	
Electric lighting	2,734 57	
Water-supply and settees	2,176 71	
Machinery, tools, etc.	468 75	

Amounts carried forward,

\$589,990 85 \$2,143,387 94

<i>Amounts brought forward,</i>	\$589,990 85	\$2,143,387 94
Boating-service	181 21	
Gate-house	58 30	
		590,230 36

LEVERETT PARK.

Excavating, lawns and woods, grading, loam and general work	\$185,313 75	
Roadways, sidewalks, gutters and drainage	77,793 72	
Retaining-walls, steps and culverts	34,865 01	
Plantations	30,337 94	
Leverett-pond bridge	9,850 59	
Plans and designs	7,177 24	
Footbridges and culverts	6,368 46	
Electric-lighting	5,278 74	
Machinery, tools, etc.	3,497 93	
Water-supply, fountains and settees	1,869 09	
Boating-service	97 24	
Filling	15 75	
Iron railing	1 25	
		362,466 71

JAMAICA PARK.

Lawns and woods, grading grounds, loam and general work	\$72,855 89	
Roadways, sidewalks, gutters and drainage	38,787 29	
Pine Bank House	32,088 86	
Retaining-walls and steps	20,676 90	
Water supply and settees	6,056 94	
Plantations	5,829 45	
Surveys, plans, designs and superintendence	3,186 07	
Machinery, tools, etc.	2,669 62	
Electric lighting	1,622 50	
Iron fence	1,162 38	
Boating-service	923 92	
Gate-house	80 73	
		185,940 55

ARBORWAY.

Roadways, sidewalks, gutters and drainage, Lawns and woods, grading grounds, loam and general work	\$164,402 70	
Arches	85,022 66	
Water-supply and settees	64,631 57	
Plantations	10,256 85	
Culverts	6,029 15	
Stony-brook bridge	5,489 53	
Walls	4,503 43	
Electric lighting	3,235 03	
Filling	3,028 00	
Machinery, tools, etc.	2,819 16	
Plans and designs	1,968 75	
		181 94
		351,568 77

ARNOLD ARBORETUM AND BUSSEY PARK.

Roadways, sidewalks, gutters and drainage, Boundary walls and gateways	\$236,907 87	
Lawns and woods, grading and general work, Machinery, tools, etc.	14,733 56	
Plans, designs and superintendence	14,733 46	
	3,271 88	
	1,649 22	

<i>Amounts carried forward,</i>	\$271,295 99	\$3,633,594 33
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PARK DEPARTMENT.

59

<i>Amounts brought forward,</i>	\$271,295 99	\$3,633,594 33
Plantations	739 41	
Water-supply and settees	164 11	
Surveying	100 00	
		272,299 51

WEST ROXBURY PARKWAY.

Clearing and grading grounds, loam and general work	\$5,551 24	
Plantations	1,156 96	
Plans, designs and superintendence	550 02	
		7,258 22

FRANKLIN PARK.

Roadways, sidewalks and gutters	\$683,860 00	
Lawns and woods, grading grounds, drain- age and general work	490,532 48	
Plantations	131,276 94	
Refectory building	105,770 96	
Seaver-street improvement	84,817 75	
Shelter and Overlook	60,561 54	
Forest Hills bridge	52,972 17	
Scarboro' Pond	40,943 11	
Park wall and gateways	31,923 90	
Arbor, Schoolmaster's hill	29,514 11	
Plans, designs and superintendence	28,334 94	
Reservoir	27,634 39	
Scarboro' Pond bridges	26,703 10	
Water-supply, fountains and settees	24,879 95	
Ellicott Arch	16,732 21	
Pergola wall, steps and terrace	16,244 30	
Ellicott House	14,922 87	
Carriage-sheds	14,007 63	
Ellicottdale	12,542 94	
Structures	11,916 12	
Machinery, tools, etc.	11,629 40	
Playstead and flag-staff	10,399 76	
Propagating-house	8,205 55	
Electric lighting	5,600 00	
Terrace wall	3,956 05	
Concourse, Scarboro' Hill	3,569 80	
Culverts	3,129 34	
Carriage shelter	2,694 70	
Boating-service	38 01	
		1,955,314 02

MARINE PARK SYSTEM.

DORCHESTERWAY.

Roadways, sidewalks, gutters and drainage, ...	\$31,160 73	
Filling	21,821 82	
Grading, loam and general work	9,349 21	
Plans, designs and superintendence	1,317 24	
Culverts	653 00	
Plantations	102 90	
		64,404 90

STRANDWAY.

Filling	\$78,524 27
Sea-wall and grading	68,562 92
Clearing, grading, loam and general work	20,627 16

<i>Amounts carried forward,</i>	\$167,714 35	\$5,932,870 98
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<i>Amounts brought forward,</i>	\$167,714 35	\$5,932,870 98
Drainage	4,377 48	
Plans, designs and superintendence	128 90	
Culverts	60 50	
Plantations	18 80	
		172,300 03

MARINE PARK.

Filling, grading, loam and general work	\$558,582 67	
Iron pier and railing	175,571 99	
Head-house	110,734 55	
Pier-head	67,232 97	
Structures, temporary pier, and gas-lights	43,829 05	
Roadways, sidewalks, gutters and drainage, ...	37,949 27	
Plantations	6,699 12	
Bulkhead	4,996 00	
Plans, designs and superintendence	3,870 46	
Electric lighting	2,453 04	
Water-supply, settees and fence	1,988 04	
Dredging	1,114 20	
Boating-service	995 71	
Machinery, tools and implements	38 00	
		1,016,055 07

CASTLE ISLAND.

Temporary buildings and structures	\$25,512 20	
Clearing, grading grounds and drainage	3,837 98	
Water-supply, settees and tent	2,002 98	
Plantations	481 19	
Shelter	100 00	
		31,934 35

WOOD ISLAND PARK.

Lawns and woods, grading, loam and general work	\$95,810 06	
Neptune bridge	32,320 63	
Filling	29,852 82	
Field-house	20,283 89	
Roads, walks, gutters and drainage	11,273 81	
Gymnasium grounds, apparatus and play-ground	7,280 92	
Plantations	7,196 29	
Bath-house	3,155 13	
Iron fence and frame	3,039 99	
Electric lighting	2,116 23	
Water-supply	2,048 63	
Plans, designs and superintendence	1,488 03	
Culverts	425 00	
Tool-house	196 04	
Machinery, tools and implements	42 80	
		216,530 27

CHARLESBANK.

Sea-wall and filling	\$176,353 90	
Gymnasium grounds, apparatus, filling, loam and general work	52,093 85	
Men's Lavatory building	23,250 53	
Women's Lavatory building and children's shelter	17,689 18	
Plantations	12,137 30	
Walks and drainage	11,684 89	

<i>Amounts carried forward,</i>	\$293,209 65	\$7,869,690 70
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PARK DEPARTMENT.

61

<i>Amounts brought forward,</i>	\$293,209 65	\$7,369,690 70
Iron railing, fence and gas-lights	8,367 29	
Plans, designs and superintendence	2,076 27	
Damage	972 51	
Water-supply	831 41	
Machinery, tools, etc.	56 00	
		305,513 13

CHARLESTOWN HEIGHTS.

Grading, clearing, filling, loam and general work	\$27,813 06	
Shelter building	27,240 32	
Retaining-wall.	18,838 98	
Sidewalks, gutters and drainage	8,200 50	
Plantations	7,751 38	
Steps	3,971 42	
Plans, designs and superintendence	1,330 59	
Water-supply, settees, fountains and flag-staff	486 51	
Electric lighting	334 00	
		95,966 76

CHARLESTOWN PLAYGROUND.

Grading, loam and general work	\$8,572 80	
Plantations	475 60	
Plans, designs and superintendence	204 99	
Walks and drainage	9 78	
		9,263 17

DORCHESTER PARK.

Clearing and grading grounds	\$1,328 19	
Shelter	963 32	
Plans, designs and superintendence	793 44	
Temporary structures	774 95	
		3,859 90

FRANKLIN FIELD.

Clearing and grading grounds	\$28,411 67	
Drainage	26,767 98	
Plantations	10,883 16	
Temporary structures	2,704 27	
Plans, designs and superintendence	815 06	
Fence and wall	703 95	
Machinery, tools, etc.	480 55	
Water-supply	46 89	
		70,813 53

NORTH END BEACH.

Clearing, grading and general work	\$57,542 59	
Plans, designs and superintendence	1,089 14	
Boring	224 62	
Administration Building and Women's bath-house	39,820 93	
Men's bath-house	11,337 57	
Piers	31,067 65	
Walls	8,422 73	
Iron railing	3,698 88	
Walks and drainage	1,946 63	
Band-stand	571 44	

<i>Amounts carried forward,</i>	\$155,722 18	\$7,855,107 19
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<i>Amounts brought forward,</i>	\$155,722 18	\$7,855,107 19
Temporary building	33 73	
Plantations	7 50	
		155,763 41

COPP'S HILL TERRACES.

Walls, drainage, grading and general work .	\$29,622 63	
Plans, designs and superintendence . .	110 83	
Sidewalks	90 58	
		29,824 04

NORTH BRIGHTON PLAYGROUND.

Filling	\$1,668 50	
Grading, loam and general work	1,288 82	
Walks, gutters and drainage	138 36	
		3,095 68

NEPONSET PLAYGROUND.

Grading, loam and general work	\$277 74	
Bulkhead	533 10	
Water-supply	152 48	
		963 32

BILLINGS FIELD.

Grading, loam and general work	18 50	
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FIRST-STREET PLAYGROUND.

Grading loam and general work	\$5,320 40	
Gutters and drainage	2,272 41	
Filling	987 28	
Water-supply	912 96	
Plantations	61 80	
		9,554 85

FELLOWS-STREET PLAYGROUND.

Filling	496 28	
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SUNDRY ACCOUNTS.

General account	\$73,987 50	
Park Nursery	29,947 07	
		103,934 57
		\$8,158,757 84

VI.

*Summary of Expenditures on account of Public Park Land,
Construction and Betterments from the Organization of the
Board October 8, 1875, to January 31, 1898.*

LAND.

Main Park System:	
Fens	\$596,254 49
Riverway	452,457 53
Leverett Park	269,104 04
Jamaica Park	812,843 56
Arborway	245,584 25
<i>Amount carried forward,</i>	\$2,376,243 87

<i>Amount brought forward,</i>		\$2,376,243	87
Arnold Arboretum and Bussey			
Park		76,790	35
West Roxbury Parkway		117,665	29
Franklin Park		1,551,196	63
		\$4,121,896	14
Marine Park System:			
Dorchesterway		\$63,725	54
Strandway		442,880	97
Marine Park		232,972	57
		739,589	08
Wood Island Park		132,800	00
Charlesbank		373,916	99
Trinity Triangle		30,000	00
Charlestown Heights		50,538	02
Charlestown Playground		172,923	31
Dorchester Park		63,239	97
Franklin Field		157,341	22
North End Beach		328,364	44
Copp's Hill Terraces		90,858	19
North Brighton Playground		21,861	73
Neponset Playground		1,698	50
Billings Field		418	75
Freeport-street Triangle		4,000	00
North End Playground		99,228	95
Mystic Playground		50,000	00
Fellows-street Playground		14,503	72
Christopher Gibson Playground		37,500	00
		6,490,679	01

CONSTRUCTION.

Main Park System:			
Commonwealth avenue		\$100,745	77
Fens		2,042,642	17
Riverway		590,230	36
Leverett Park		362,466	71
Jamaica Park		185,940	55
Arborway		351,563	77
Arnold Arboretum and			
Bussey Park		272,299	51
West Roxbury Parkway		7,258	22
Franklin Park		1,955,314	02
		\$5,868,466	08
Marine Park System:			
Dorchesterway		\$64,404	90
Strandway		172,300	03
Marine Park		1,016,055	07
Castle Island		31,934	35
		1,284,694	35
Wood Island Park		216,530	27
Charlesbank		305,513	13
Charlestown Heights		95,966	76
Charlestown Playground		9,263	17
Dorchester Park		3,859	90
Franklin Field		70,813	53
North End Beach		155,763	41
Copp's Hill Terraces		29,324	04
North Brighton Playground		3,095	68
Neponset Playground		963	32
Billings Field		18	50
<i>Amounts carried forward,</i>		\$8,044,772	14
		\$6,490,679	01

<i>Amounts brought forward,</i>	\$8,044,772 14	\$6,490,679 01
First-street Playground	9,554 85	
Fellows-street Playground	496 28	
General Account	73,987 50	
Park Nursery	29,947 07	
		8,158,757 84

BETTERMENTS.

Betterment expenses	13,356 10
	<u>\$14,662,792 95</u>

VII.

**PARK BETTERMENTS COLLECTED BY CITY COLLECTOR,
TO FEBRUARY 1, 1898.**

	Assessm'ts committed to Collector.	Abated.	Net Assessm'ts	Collected.	Outstand- ing Feb. 1, 1898.
Public Park, Back Bay...	\$434,600 00	\$143,126 73	\$291,473 27	\$290,404 27	\$1,069 00
Marine Park	23,543 00	12,616 80	10,926 20	10,926 20	
Franklin Park.....	135,029 00	122,000 66	13,028 34	13,028 34	
Parkway, Old Harbor....	60,789 00	50,426 00	10,363 00	8,256 00	2,107 00
“ Muddy River...	108,972 00	74,775 00	34,197 00	21,889 00	12,308 00
“ West Roxbury..	154,107 00	92,376 50	61,730 50	22,545 00	39,185 50
“ Dorchester.....	9,713 00	568 00	9,145 00	5,040 94	4,104 06
	<u>\$926,753 00</u>	<u>\$495,889 69</u>	<u>\$430,863 31</u>	<u>\$372,089 75</u>	<u>\$58,773 56</u>

VIII.

PUBLIC PARK DEBT.

Liabilities.

Total loan outstanding, January 31, 1898 . . . \$12,118,300 00

Resources.

Resources of Sinking Fund, January 31, 1898 . . . 2,556,913 37

Net debt, January 31, 1898 . . . \$9,561,386 63

Park Statistics to January 31, 1898.

PARKS.	Year of Taking.	COST TO DATE.		Total.	Area.	Length of Driveways	Length of Walks.	Length of Rides.	Area of Ponds and Rivers.
		Land.	Construction						
MAIN PARK SYSTEM:									
Commonwealth Avenue	1894.....	.....	\$100,745 77	\$100,745 77	30 acres.....	2.8 miles	4.13 miles		
* Fens.....	1873.....	\$596,254 49	2,042,642 17	2,638,896 66	115 "	4 "	6.7 "	1.1 miles	28 acres
* † Riverway	1890.....	452,457 53	590,230 36	1,042,687 89	40 "	1.4 "	2.8 "	1.2 "	8 "
* † Leverett Park	1890 and 1892	269,104 04	362,466 71	631,570 75	60 "	1.2 "	3.4 "	0.9 mile	14 "
* Jamaica Park.....	1892.....	812,843 56	185,940 55	998,784 11	120 "	1.5 "	5.6 "	0.7 "	64.5 "
Arboretum	1892.....	245,584 25	351,568 77	597,153 02	36 "	3.4 "	1.25 "	1.4 miles	
* Arboretum	1882 and 1895	76,790 35	272,299 51	349,089 86	223 "	3.7 "	7.2 "	.....	0.6 acre
West Roxbury Parkway	1894.....	117,665 29	7,258 22	124,923 51	150 "	4.1 "			
* Franklin Park	1883 and 1884	1,551,196 63	1,955,314 02	3,506,510 65	527 "	10.0 "	19.1 "	2.5 miles	7.4 acres
MARINE PARK SYSTEM:									
* Dorchesterway	1892.....	63,735 54	64,404 90	128,140 44	6 "	0.75 "	1.6 "		
Strandway	{ 1890, 1892 } { and 1897 }	442,880 97	172,300 03	615,181 00	{ 48 land } { 212 flats }	1.7 "	3.1 "		
* Marine Park	1883.....	232,972 57	1,016,055 07	1,249,027 64	{ 34 land } { 150 flats }	0.9 mile	2.6 "	.....	4.4 "
Castle Island.....	1890.....	.....	31,934 35	31,934 35	{ 21 land } { 83 flats }	0.4 "	1.6 "		
Carried forward.....				\$7,153,160 43	\$12,014,645 63				

Park Statistics to January 31, 1898. — *Concluded.*

PARKS.	Year of Taking.	COST TO DATE.		Total.	Area.	Length of Driveways.	Length of Walks.	Length of Ponds and Rivers.
		Land.	Construction.					
<i>Brought forward.</i>.....	.....	\$4,861,485 22	\$7,153,160 43	\$12,014,645 63				
* WOOD ISLAND PARK	1882 and 1891	132,800 00	216,530 27	349,330 27	{ 46 " land } { 165 " flats }	1.1 miles	2.9 "	
* CHARLESBANK	1883.....	373,916 99	305,513 13	679,430 12	10 "	.....	1.5 "	
* TRINITY TRIANGLE	1885.....	30,000 00	.....	30,000 00	5,410 sq. feet...	.....		
* CHARLESTOWN HEIGHTS	1891.....	50,538 02	95,966 76	146,504 78	{ 4 acres land } { 6 " flats }	.....	0.4 mile	
* CHARLESTOWN PLAYGROUND	1891.....	172,923 31	9,263 17	182,186 48	{ 14 " land } { 4 " flats }	.....	0.9 "	
* DOECHESTER PARK	1891.....	63,233 97	3,859 90	67,093 87	26 "	.....		
* FRANKLIN FIELD	1892.....	157,341 22	70,813 53	228,154 75	77 "	.....		
* PUBLIC PARK, NORTH END.....	1893.....	413,222 63	185,587 45	604,810 08	{ 3 " land } { 4 " flats }	.....	0.43 "	
* NORTH BRIGHTON PLAYGROUND..	1894.....	21,861 73	3,095 68	24,957 41	14 "	.....		
NETONSET PLAYGROUND	1896.....	1,698 50	963 32	2,661 82	18 "	.....		
BILLINGS FIELD	1896.....	418 75	18 50	437 25	11 "	.....		
FIRST-STREET PLAYGROUND.....	1897.....	.....	9,554 85	9,554 85	4.6 "	.....		
* FREEPORT-STREET TRIANGLE....	1897.....	4,000 00	.....	4,000 00	6,253 sq. feet	.....		
NORTH END PLAYGROUND.....	1897.....	99,228 95	.....	99,228 95	11,384 "	.....		
* MYSTIC PLAYGROUND	1897.....	50,000 00	.....	50,000 00	2.3 acres	.....		

* FELLOWS-STREET PLAYGROUND..	1897.....	14,503 72	496 28	15,000 00	36,955 sq. feet. 5.8 acres		
* CHRISTOPHER GIBSON "	1897.....	37,500 00	.....	37,500 00			
General account		\$6,490,679 01	\$8,054,823 27	\$14,545,502 28			
Park Nursery.....		.....	73,987 50	73,987 50			
Betterment Expenses .....		.....	29,947 07	29,947 07			
		.....	13,356 10	13,356 10			
	.....	\$6,490,679 01	\$8,172,113 94	\$14,662,792 95	2,271 acres	36.95 miles	65.21 miles
						7.8 miles	126.9 acres

* The lands in these parks and playgrounds have been paid for in full. † An additional area of 34 acres is within the limits of the town of Brookline.
Of the above total lengths of Driveways, Walks and Rides, there have been completed to date respectively 22.7 miles, 32.6 and 6.2 miles.

PENDING CONTRACTS.

The pending contracts, with the value of the unperformed work, are as follows :

CONTRACTOR.	Place.	Nature of Work.	Date of Finishing speci- fied in Contract.	Amount.	Unperformed.
Woodbury & Leighton.....	Riverway	Longwood-avenue Bridge...	June 1, 1899.....	\$57,500 00	\$42,301 03
Boston Electric Light Company.....	Jamaica Park and Arborway	Electric Lighting.....	.....	3,200 00	3,200 00
Thomas F. Broderick.....	Jamaica Park.....	Culvert.....	Dec. 15, 1897.....	475 00	475 00
Simon J. Donovan.....	Strandway.....	Sea-wall and Grading.....	June 1, 1898.....	79,350 00	61,442 20
Hugh Farrell.....	"	Grading.....	Dec. 1, 1897.....	75,200 00	17,039 59
"	"	N-street Sewer.....	Jan. 31, 1897.....	2,817 00	60 00
				\$143,342 00	\$124,517 82

APPENDIX.

REPORT OF THE COMMITTEE OF THE MASSACHUSETTS EMERGENCY AND HYGIENE ASSOCIATION IN CHARGE OF THE WOMEN'S AND CHILDREN'S GYMNASIUM AT CHARLESBANK.

BOSTON, January 31, 1898.*To the Board of Park Commissioners :*

GENTLEMEN: The total week-day attendance for the seventh year of our superintendence of Charlesbank was 218,572, an increase of 27,676 over last year; the total Sunday attendance, 20,715 and the Sunday average, 863. The highest attendance on any single day was, on May 29, 4,332. Of these numbers 71,632 took gymnastic exercise or a daily average of 498. In classes for gymnastic practice 1,267 have been gathered, 420 beginners, 213 advanced pupils, 175 large girls and 459 women. There have also been seventeen special pupils, several of whom were sent by physicians for treatment. These special cases and the class of women proved very interesting, since they were both old and humble enough to realize the benefit to their health from such regular out-door exercise.

There were but six minor accidents, which testify to the exceeding watchfulness of the superintendents. The novelty of the baths has worn off, and their utility is not yet widely accepted. We have, therefore, but 3,020 spray and 244 tub-baths to record. Whether or not the use of the baths should be more widely extended than confined as at present to those who take regular gymnastic exercise, is a matter for serious consideration, though we have neither space nor means to accommodate a large number at any one time, as there are but four spray and two tub-baths. Certainly, if the little children were admitted to the privileges of a spray-bath, several women would have to be employed as bath-tenders.

The playground, with its kindergarten department, is one of the delightful features of Charlesbank. Miss Maud Wessel, kindergarten, had during the public school vacation 3,589 pupils or a daily average of fifty-five. The freedom of the grassy playground, the joy of the sand pens, the varied amusements in games and books inside the Lodge, are more and more widely appreciated.

The winter classes are held twice a week in the evenings, under the teaching of Miss Mary Mahoney and the piano accompaniment of Miss Katherine Purcell. We have been fortunate in securing the voluntary services of several of the pupils of Dr. Sargent, director of the Hemenway Gymnasium at Harvard University; the winter classes serving as a kind of practise school to these students where they give their first lessons in gymnastics. This

arrangement is of such practical benefit to them and to our classes that we trust it may be a permanent one.

The rare fidelity and discretion of the superintendent, Miss E. C. McMartin, and her assistants, make the work of the committee, in the general oversight of the Women's Division, a most pleasant duty, one which all the members of the committee share in turn with fresh interest each year in the varied life of Charlesbank.

MRS. KATE GANNETT WELLS,
MISS ELLEN M. TOWER,
MRS. F. A. WILLIAMS,
MRS. GEORGE W. STONE,
MISS S. L. LOVERING,
MISS L. A. WELLS,
MRS. GEORGE C. DOLLIVER,
MR. CHARLES FRY,
D. A. SARGENT, M.D.,
Committee.

STATUTES OF THE COMMONWEALTH RELATING TO
PUBLIC PARKS IN THE CITY OF BOSTON.

[Stat. 1897. — Chap. 162.]

AN ACT TO AUTHORIZE THE CITY OF BOSTON AND THE TOWN OF
BROOKLINE TO REBUILD LONGWOOD-AVENUE BRIDGE.

SECTION 1. The city of Boston by its board of park commissioners, and the town of Brookline by its board of park commissioners, are hereby authorized to construct a new bridge in place of the existing bridge between said city and town, forming a part of Longwood avenue said new bridge to be in such location and of such width, grade and materials as said boards may agree upon. All expenses incurred by said boards in building said bridge and the abutments thereof shall be borne equally by the two municipalities, and shall be paid by the respective treasurers thereof on the certificates of said boards, and shall be deemed and accounted for as expenditures for park purposes.

SECT. 2. The provisions of sections one hundred and seventeen to one hundred and thirty-eight, both inclusive, of chapter one hundred and twelve of the Public Statutes, and of any acts in amendment thereof, shall not apply to said bridge, but where the bridge crosses the location of the Boston and Albany railroad it shall not be constructed at a height less than eighteen feet above the tracks of said railroad, except with the written consent of the board of railroad commissioners.

SECT. 3. Each of said municipalities within its own limits shall, at its own expense, by the board of park commissioners thereof, construct the approaches to said bridge, and the public ways connected with said approaches, of such widths, grades and materials as the board may deem proper, and may alter or widen existing approaches and connected ways; but neither of said municipalities shall be liable to pay any expenses of construction of such approaches or connected ways, or any land, grade or other damages incurred in constructing such approaches or connected ways which are not within its own limits, the joint liability of said municipalities under this act for the expenses of construction being limited to the expenses of constructing said bridge and the abutments thereof: *provided, however*, that no such bridge, bridge-approach or public way within the limits of the town of Brookline shall be laid out, altered or widened until the laying out, alteration or widening of the same is by the park commissioners of said town reported to the town and filed, accepted and allowed in the manner provided by section seventy-one of chapter forty-nine of the Public Statutes, in the case of the laying out of town ways; and no such bridge, bridge-approach or public

way in the city of Boston shall be constructed, altered or widened until the same is approved by the board of street commissioners and the mayor.

SECT. 4. Each of said boards shall within the limits of its municipality take, by purchase or otherwise, such lands in fee or rights in land for carrying out the purposes of this act as the board may deem necessary therefor, and shall determine the damages sustained by any person by the taking of land or any other act done under authority of this act; and any person aggrieved by any such determination may have his damages determined by a jury in the superior court in the same manner as damages are determined for the taking of land in the laying out of ways within the limits of such municipality, and costs shall be taxed and execution issued as in civil cases.

SECT. 5. Such parts of said Longwood avenue, of said bridge, bridge-approaches and public ways as lie within the limits of the town of Brookline shall be and remain town ways, and such parts of said Longwood avenue, of said bridge, bridge-approaches and public ways as lie within the limits of the city of Boston shall be and remain highways: *provided, however*, that said boards shall jointly maintain and keep in repair the said bridge and its abutments, and said city and town shall be jointly liable for all damages occasioned by any defect or want of repair therein or want of sufficient railing thereon, subject however to all the provisions of law now or hereafter in force limiting or regulating the right to recover damages for defects in public ways.

SECT. 6. The said town of Brookline may raise from time to time, by borrowing or otherwise, and may appropriate and expend such sums of money as may be deemed necessary for the purpose of defraying the expenses that may be incurred by said town under the provisions of this act, subject to the laws of this Commonwealth limiting and regulating municipal indebtedness: *provided, however*, that any debts incurred for the purposes mentioned in this act may be made payable in or within twenty years.

SECT. 7. This act shall take effect upon its passage.

(*Approved March 17, 1897.*)

[Stat. 1897. — Chap. 365.]

AN ACT TO AUTHORIZE THE BOARD OF PARK COMMISSIONERS OF THE CITY OF BOSTON TO LEASE LANDS OR BUILDINGS UNDER THEIR CONTROL FOR BOATHOUSES AND OTHER PURPOSES.

SECTION 1. The board of park commissioners of the city of Boston may lease any lands or buildings under their control, to be used for boathouses, refectories and other purposes, and may grant concessions for keeping boats, carriages and other things for the accommodation of the public, for such terms and on such conditions as the board, with the approval of the mayor, may deem proper: *provided*, that nothing in this act shall be so construed as to affect in any way any contract or agreement

entered into by said board of park commissioners prior to the passage of this act.

SECT. 2. This act shall take effect upon its passage.

(Approved May 10, 1897.)

Stat. 1897. — Chap. 379.

AN ACT RELATIVE TO THE BUILDING LINE AND HEIGHT OF
BUILDINGS ON PARKWAYS, BOULEVARDS AND PARKS.

SECTION 1. Section one of chapter three hundred and thirteen of the acts of the year eighteen hundred and ninety-six is hereby amended by striking out all of said section after the word "feet", in the tenth line, and inserting in place thereof the words:— exclusive of such steeples, towers, domes, cornices, parapets, balustrades, sculptured ornaments, chimneys and roofs, as the board of park commissioners may approve,— so as to read as follows:— *Section 1.* The board of park commissioners of a city or town may, in the manner and in accordance with and subject to the provisions of chapter four hundred and sixty-two of the acts of the year eighteen hundred and ninety-three, establish a building line, at no point more than twenty-five feet distant from any exterior line of a parkway, boulevard or public way on which a park borders; and the extreme height to which buildings may be erected upon such parkway, boulevard or public way shall be seventy feet, exclusive of such steeples, towers, domes, cornices, parapets, balustrades, sculptured ornaments, chimneys and roofs, as the board of park commissioners may approve.

SECT. 2. This act shall take effect upon its passage.

(Approved May 10, 1897.)

Stat. 1897 — Chap. 394.

AN ACT RELATIVE TO PARKWAYS IN THE CITY OF BOSTON.

SECTION 1. The board of street commissioners of the city of Boston, acting under the provisions of chapter three hundred and twenty-three of the acts of the year eighteen hundred and ninety-one, and acts in amendment thereof or in addition thereto, and from the proceeds of the bonds and certificates authorized to be issued for laying out, locating anew, altering, widening and constructing highways under said provisions, may locate anew, alter, widen, lay out and order to be constructed, a public way over public ways and private lands, connecting Franklin Park with the Marine Park in said city, and the same shall be constructed under the provisions of said acts; and in making any such laying out and construction the directions, widths and grades shown on a plan or plans made under the provisions of said acts may be followed, or such others as said board or the officer making such construction may deem best for the public.

SECT. 2. Said board may designate a certain part or parts of said public way to be under the charge of the board of park

commissioners of said city as a parkway, and said board of park commissioners shall, after the construction thereof, have the charge and control of such parkway, as if the same had been placed in its charge under the provisions of chapter three hundred of the acts of the year eighteen hundred and ninety-three.

SECT. 3. Said board of street commissioners, with the concurrence of said board of park commissioners and the approval of the mayor, shall specify to the treasurer of said city the amount required for carrying out so much of the order of said board of street commissioners as applies to the part or parts of said way to be used as a parkway as aforesaid; and said treasurer in issuing said bonds and certificates shall cause the same, to the amount so specified, to be designated on their face as Public Park Loan, and the proceeds thereof shall be expended and deemed and considered as expenditures for public park purposes.

SECT. 4. This act shall take effect upon its passage.

(Approved May 13, 1897.)

[Stat. 1897. — Chap. 396.]

AN ACT TO AUTHORIZE THE CITY OF BOSTON TO ABATE A PORTION
OF THE BETTERMENT ASSESSMENT MADE ON ACCOUNT OF THE
LAYING OUT OF DORCHESTERWAY.

SECTION 1. The City of Boston may at any time within two years from the passage of this act authorize the board of park commissioners of said city to abate such proportion, not exceeding sixty per cent., of any assessment for a betterment made on account of the laying out of the parkway known as Dorchesterway, as said board shall deem just and expedient, and may authorize the treasurer of said city to repay such proportion of any assessment which is paid into the treasury of said city as said board of park commissioners shall approve. The expense incurred under this act shall be charged to the appropriation for the park department of said city.

SECT. 2. This act shall take effect upon its passage.

(Approved May 13, 1897.)

[Stat. 1897. — Chap. 523.]

AN ACT TO PROVIDE FOR A HIGHWAY AROUND THE BACK BAY
FENS IN THE CITY OF BOSTON.

SECTION 1. The board of street commissioners of the city of Boston, with the approval of the mayor, may lay out under the provisions of chapter three hundred and twenty-three of the acts of the year eighteen hundred and ninety-one, and acts in amendment thereof or in addition thereto, a highway from such part of Boylston street or road on the easterly side of the Back Bay Fens to such part of Boylston street on the westerly side of said Back Bay Fens over and under said Fens northerly of Boylston road, and any parkway, or other way, and may lay out said high-

way, and Boylston street from said Fens to Brookline avenue, according to such directions, grades and widths not less than fifty feet in any part, as they shall deem the public convenience may require, and shall not be confined to any plan heretofore filed of the territory in which such ways or any part thereof are situated, and may hereafter establish a new building line on said ways or any part thereof: *provided, however*, that the lines, directions, widths, grades and construction of all parts of said highway lying northerly or easterly of Lansdowne street, so-called, and of any bridges over, or forming a part of said highway, shall be subject to the approval of the board of park commissioners and the mayor of said city.

SECT. 2. Upon the passage of said order the superintendent of streets of said city shall proceed to construct said highway under the provisions of said acts and the other acts relating to the construction of ways laid out under the orders of said board of street commissioners, and shall construct any bridge that may be required for a parkway or other public way over said highway.

SECT. 3. The expenses incurred in carrying out the provisions of the preceding sections shall be paid from the proceeds of the bonds authorized to be issued by chapter three hundred and nineteen of the acts of the year eighteen hundred and ninety-seven, and so much of the assessable cost of the part of said highway that lies south of the southerly side of Lansdowne street, so-called, as said board of street commissioners shall determine, and said mayor shall approve, shall be repaid to the city by the owners only of the estates abutting on said part, as provided in said chapter three hundred and twenty-three of the acts of the year eighteen hundred and ninety-one and acts in amendment thereof and in addition thereto; and so much of the assessable cost of the part of said highway that lies east of said Fens as said board shall determine, and said mayor shall approve, shall be repaid to the city by the owners only of the estates abutting on said part, as provided in said acts, and the remainder of the cost of said highway and bridges shall be assumed by said city, and no part of said remainder shall be assessed upon abutting or other estates.

SECT. 4. The West End Street Railway Company, when said highway shall be ready for the laying of its tracks therein, shall have a location therein subject to revocation in the same manner as the other locations of said company in said city, and shall construct and operate its railroad by electricity from a junction with its other tracks on Massachusetts avenue or Boylston street, across Massachusetts avenue, to and upon said Boylston street, to and upon said highway, to and upon said Boylston street, to and upon Brookline avenue, to a junction with the tracks heretofore constructed by said company upon said avenue; and shall place its tracks, turn-outs, switches and other structures in said street, highway and avenues, in such places, in such manner and of such construction as said board of park commissioners and mayor shall approve.

SECT. 5. Said board of street commissioners, with the approval of the mayor, within six months after the passage of this act may, on the plan of the territory between said Fens, said Brookline avenue and the Boston and Albany railroad, made by Pierre Humbert, Junior, and filed in the office of the city surveyor or city engineer of said city, make such changes in the lines, directions, widths, grades and building lines of any streets shown thereon, where they connect with Boylston road or Audubon road as they may deem necessary; and may make such changes in the lines, directions, widths, grades and building lines, or discontinue any building line, or any part of any street leading northwesterly from either of said roads, as they deem necessary; and the plan as so changed shall have the same effect and consideration as before the changes were made.

SECT. 6. This act shall take effect upon its passage.

(Approved June 11, 1897.)

STATUTES OF THE COMMONWEALTH RELATING TO
PUBLIC PARKS IN OR NEAR THE
CITY OF BOSTON.

YEAR. CHAPTER.

1866. 247. — An Act to authorize the Erection of a Sea wall, and the filling of certain flats in Charles river, to abate a nuisance.
- *1870. 283. — An Act for the Laying out of one or more Public Parks in or near the City of Boston.
- †1875. 185. — An Act for the Laying out of Public Parks in or near the City of Boston.
1880. 144. — An Act to authorize the connection of the Arnold Arboretum with the System of Parks of the City of Boston.
1881. 92. — An Act in addition to an Act for the Laying out of Public Parks in or near the City of Boston. [Charles-river Embankment.]
1881. 197. — An Act to authorize the Construction of the Charles-river promenade.
1882. 168. — An Act to authorize the City of Boston to Issue a Public Park Loan.
1884. 226. — An Act in relation to betterments for Locating, Laying out, and Constructing Streets, Ways, and Public Parks.
1884. 237. — An Act in relation to assessments for Public Improvements.
1885. 299. — An Act requiring notice of assessments of betterments to be given to the party to be charged thereby.
1885. 360. — An Act in further addition to an Act for the Laying out of Public Parks in or near the City of Boston. [Marine Park.]
1886. 65. — An Act extending the time for the completion of the Public Park in the City of Boston known as the Charles-river Embankment.
1886. 134. — An Act to change a portion of the line of the Sea wall of the Public Park in the City of Boston, known as the Charles-river Embankment.
1886. 304. — An Act to authorize a Loan for the construction of Public Parks in or near the City of Boston.
1887. 312. — An Act to authorize a Loan for the payment for lands heretofore acquired for Public Parks in or near the City of Boston.
1887. 427. — An Act to enlarge the area for the proposed Marine Park of the City of Boston between South Boston and Castle Island.

* This Act was to take effect when accepted by two-thirds of the legal voters voting thereon at the State election. The vote in favor was 9,233; against, 5,916. The Act consequently was rejected.

† This Act was accepted by a majority of the legal voters voting thereon, June 9, 1875. Yeas, 3,706; nays, 2,311.

YEAR. CHAPTER.

1888. 376. — An Act to authorize the City of Boston to refund a portion of the money paid as betterments for the Marine Park in said City.
1888. 392. — An Act to enable the City of Boston, for the purpose of obtaining lands for its Public Parks, to incur indebtedness outside of the limit fixed by law.
1889. 129. — An Act relating to buildings in the Public Parks of the City of Boston.
1889. 438. — An Act to authorize the enlargement of the proposed Marine Park in the City of Boston.
1890. 271. — An Act to authorize the City of Boston to incur indebtedness outside of its debt limit, to procure and construct one or more Public Parks in the Charlestown District of the City of Boston.
1890. 339. — An Act changing the boundary between the City of Boston and the Town of Brookline.
1890. 444. — An Act to amend an Act authorizing the City of Boston to incur indebtedness outside of its debt limit to procure and construct one or more Public Parks in the Charlestown District of the City of Boston.
1891. 301. — An Act to authorize the City of Boston to incur a debt for Park purposes beyond the limit fixed by law.
1891. 344. — An Act to authorize the City of Boston to construct a Sea wall and extend the Charles-river Embankment.
1891. 390. — An Act to provide for the appointment of the Charles-river Improvement Commission.
1892. 371. — An Act to authorize the City of Boston to take Jamaica Pond and Ward's Pond for a Public Park.
1893. 126. — An Act in relation to raising the grade and changing the location of the Providence Division of the Old Colony Railroad in the City of Boston.
1893. 211. — An Act in relation to the issue of bonds and certificates for Park purposes by the City of Boston.
1893. 225. — An Act to authorize cities and towns to establish and maintain Public Playgrounds.
1893. 258. — An Act to authorize the City of Boston to refund or abate a portion of its betterments assessed for the extension of the Marine Park.
1893. 282. — An Act to provide for a Public Park in Wards 6 and 7 of the City of Boston.
1893. 300. — An Act relative to the Laying out of Public Parks by towns and cities. [Boulevard Act.]

YEAR. CHAPTER.

1893. 331. — An Act relative to leasing open spaces for Gardens and Playgrounds by cities and towns.
1893. 407. — An Act to establish a Metropolitan Park Commission.
1893. 416. — An Act relating to an Act relative to the Laying out of Public Parks by towns and cities.
[Amended Stat. 1893, Chap. 300.]
1893. 435. — An Act in relation to the construction of a Sea wall and the extension of the Charles-river Embankment by the City of Boston.
1893. 475. — An act to provide for the improvement of Charles river.
1894. 288. — An Act to authorize the Metropolitan Park Commission to construct Roadways and Boulevards.
1894. 396. — An Act to authorize the City of Boston to incur indebtedness beyond the limit fixed by law, for Park purposes.
1894. 483. — An Act to authorize the Commonwealth to acquire the location in part of the Boston, Revere Beach & Lynn Railroad, and to authorize a relocation in part of said railroad.
1894. 509. — An Act to authorize the Metropolitan Park Commission to expend a sum of money, in addition to the amounts heretofore authorized, for open spaces along or near the Charles river.
1895. 45. — An Act to authorize the Extension of the Arnold Arboretum.
1895. 185. — An Act to authorize the City of Boston to abate a Portion of the Betterments made on account of the Laying out of Jamaica Park and Arborway.
1895. 272. — An Act changing the Limits within which Land may be taken by the Metropolitan Park Commission within the City of Medford.
1895. 305. — An Act relative to the taking by the Metropolitan Park Commission of Revere Beach, so-called, in the town of Revere.
1895. 450. — An Act relative to the Metropolitan Park Commission.
1896. 199. — An Act relative to violations of regulations of Public Parks.
1896. 284. — An Act relative to excavations, fillings and constructions in tide waters for the purposes of the Public Parks of the City of Boston.
1896. 313. — An Act relative to the Building line and height of buildings on Parkways, Boulevards and Parks.
1896. 411. — An Act to authorize the sale of certain lands taken for Public Park purposes in the City of Boston.
1896. 453. — An Act to authorize the City of Boston to continue the construction of its Public Parks.

YEAR. CHAPTER.

1896. 465. — An Act to better define the authority of the Metropolitan Park Commission.
1896. 466. — An Act increasing the amount of money to be placed at the disposal of the Metropolitan Park Commission for general purposes.
1896. 472. — An Act increasing the amount of money placed at the disposal of the Metropolitan Park Commission for the construction of Roadways and Boulevards.
1896. 550. — An Act relative to the Metropolitan Parks and Boulevards.
1897. 121. — An Act to further define the authority of the Metropolitan Park Commission.
1897. 162. — An Act to authorize the City of Boston and the Town of Brookline to rebuild Longwood-avenue bridge.
1897. 311. — An Act to provide for the interest and sinking-fund requirements of the Metropolitan Parks Loans and expenses of the Metropolitan Park Commission.
1897. 365. — An Act to authorize the Board of Park Commissioners of the City of Boston to lease lands or buildings under their control for boat-houses and other purposes.
1897. 379. — An Act relative to the building line and height of buildings on parkways, boulevards and parks.
1897. 394. — An Act relative to Parkways in the City of Boston.
1897. 396. — An Act to authorize the City of Boston to abate a portion of the betterment assessment made on account of the laying out of Dorchesterway.
1897. 464. — An Act to increase the amount of money to be placed at the disposal of the Metropolitan Park Commission for general purposes.
1897. 521. — An Act to increase the amount of money to be placed at the disposal of the Metropolitan Park Commission for the construction of roadways and boulevards.
1897. 523. — An Act to provide for a highway around the Back Bay Fens in the City of Boston.



FIRST ANNUAL REPORT
OF THE
PAUPER INSTITUTIONS TRUSTEES
FOR THE YEAR 1897-98.

OFFICE OF THE PAUPER INSTITUTIONS TRUSTEES
OF THE CITY OF BOSTON, 28 COURT SQUARE, BOSTON, MASS.

HON. JOSIAH QUINCY,

Mayor of Boston:

SIR: The Board of Pauper Institutions Trustees herewith presents its report for the financial year ending January 31, 1898:

The Pauper Institutions Department was created by Act of the Legislature of 1897, Chapter 451,¹ which took effect on June 14. Previous to this time the Pauper Institutions of Boston formed part of a general "Institutions Department," comprising all the Penal, Children's, Pauper and Insane Institutions of the City, and were in charge of Mr. Ernest C. Marshall, Institutions Commissioner.

The Board was appointed by the Mayor on June 14, 1897, as follows:

William T. Sedgwick	.	.	.	for 5 years.
Alice N. Lincoln	.	.	.	" 4 "
William H. Grainger, M.D.	.	.	.	" 4 "
William L. Rutan	.	.	.	" 3 "
Sarah E. Fallon	.	.	.	" 2 "
Frances R. Morse	.	.	.	" 2 "
Walter Hunnewell	.	.	.	" 1 "

¹See Appendix.

and organized on June 19 by the choice of William T. Sedgwick as Chairman and Alice N. Lincoln as Secretary. In July, by courtesy of the Mayor, two adjoining rooms were provided and furnished for the office and headquarters of the Trustees, at No. 28 Court square.

The Board has held twenty-three regular and fourteen special meetings, nine of which have been at Long Island.

By request of the Mayor, confirmed by a vote of the Board, Mr. Ernest C. Marshall, Penal Institutions Commissioner, consented to act as Executive Agent of the Board until it should become familiar with its new duties. Mr. Marshall's service in this capacity extended from June 14 to August 1, and the Board desires to acknowledge with thanks his valuable assistance.

The offices of Superintendent at Long Island and at Charlestown are held by Dr. L. F. Wentworth and Mr. Chandler Eastman, respectively.

DISCONTINUANCE OF PRISON LABOR.

At the outset the Trustees determined that no radical changes should be made either in employees or methods without careful preliminary study of the economic and humanitarian needs of the institutions under their care. In accordance with this policy, and mainly for the purpose of completing certain farm-work which could not be delayed, the Trustees requested the Penal Institutions Commissioner to resume for a time the practice, which had long prevailed, of sending daily to Long Island a detail of prisoners from Deer Island, this practice having been discontinued by him for a few days by reason of the Act separating the Penal and Pauper Institutions. The question of the employment of penal labor had therefore to be taken up on a new basis, and the Board soon after its organization decided that one of the most important improvements which could be instituted at Long Island would be the total discontinuance of any and all prison labor. The use of such labor was consequently done away with on August 1, 1897. This change cut off from Long Island the usual supply of men who had furnished regular or emergency service, and necessitated greater care and vigilance on the part of the officers of Long Island in employing to the best advantage such men as were able to work on the farm or in the buildings. The benefit to the institution, however, was immediate and gratifying. There is now a feeling of greater independence and self-respect on the part of the inmates themselves, even though more work is

required of them, and there is no longer the mingling of two different classes, namely, those sentenced to an institution, and those voluntarily seeking the aid of the city, which before was inevitable when prisoners and paupers alike worked on the same island. No change inaugurated by the Trustees has probably done as much as this to raise the standard of the institution, and to make it, as it was originally intended it should be, an almshouse for the respectable poor, where they should be free from any contaminating influence or association.

EMPLOYMENT AND CLASSIFICATION OF INMATES.

The Trustees, for the benefit of the institution, have determined to secure the largest possible employment of inmates, believing that this will not only conduce to their happiness and usefulness, but will also aid materially in that classification which an enlightened philanthropy demands, namely, that the sick shall be placed in hospital, the feeble and infirm shall be cared for and the able-bodied shall labor, both for their own sake and for the good of all. During the seven months that the Trustees have held office, they have attempted to raise the character of the work done in the institutions, and to enforce stricter discipline in its performance. As a result, the institution at Long Island is perceptibly cleaner than formerly; the Charlestown Almshouse leaves little to be desired in this respect, and is carried on with a very small working force of officers. There is still need at Long Island for a more careful system of classification than is at present attainable by reason of the large number of inmates and the construction of the buildings, which involves placing too many men or women in large wards. One of the valuable suggestions made by the Relief Officers of Massachusetts, who visited Long Island on October 13, 1897, was that these large wards in the men's institution should be sub-divided.

PURCHASING OF SUPPLIES AND BOOK-KEEPING.

The Pauper Institutions Trustees have placed in the hands of their superintendents the purchasing of the supplies used in their respective institutions, but all requisitions for the same are required to be transmitted to the Trustees, and are carefully supervised by them. All bills for goods purchased come before the committee on finance, and are approved by the chairman of the Board. The quality of the supplies has been perceptibly improved by this method of purchasing.

The most noteworthy instance of improvement is perhaps to be found in the quality of the flour now used at Long Island.

The Board has also, as a result of the entire separation of the pauper institutions from the other institutions with which they were formerly connected, made new arrangements for the keeping of the books and accounts, transferring them from the central office in the city, where they were kept in common with the accounts of other institutions, to the office on Long Island. By this change the accounts of the institutions are more directly under the supervision of the Trustees.

MAKING AND BAKING OF BREAD.

Another change of fundamental importance which has been initiated by the Trustees, is the making of bread for the institutions at Long Island and Charlestown in the institutions themselves. The bread used in both almshouses had hitherto been brought from a distance, and was not as satisfactory as could be desired. A marked improvement in quality has resulted from the change.

EMPLOYMENT OF PAID COOK.

The employment of a paid cook and helper has done much to improve the general dietary of the institution.

THE FARM.

The Farm Department has never been developed to its fullest capacity, and the Trustees hope soon to see an improvement in the quantity and variety of vegetables raised and of crops grown on Long Island. The herd of cows has been increased by the addition of twelve tested animals, and it is hoped that by another summer enough milk may be provided by our herd to supply nearly, if not quite, all the needs of the Island. It is also recommended that a modern and more convenient pigery be built.

RANDIDGE EXCURSIONS FOR CHILDREN.

By request of the Mayor the use of a portion of Long Island was granted by the Trustees for excursions for poor children, given under the Randidge bequest. These excursions were conducted by the Penal Institutions Commissioner, and were in charge of officers serving under his direction. The children were taken to the south-western extremity of Long Island, which is remote from the institutions and buildings, and there allowed to play games and to bathe. Suitable arrangements were made for their refreshment and

tents were provided for shelter, but it is desirable that these should be replaced by structures of a more permanent and satisfactory character. About 5,000 children benefited by these excursions. They are to be continued during the summer of 1898, the Trustees having, by request of the Mayor, granted the use of a portion of Long Island, which is to be enclosed and reserved for this purpose.

RECOMMENDATIONS.

New Male Ward.

There is need of additional hospital accommodation at Long Island. There are at present eighty-five patients in the male wing, but its condition is overcrowded, and the best interests of the patients cannot always be secured when so many acute and chronic cases have to be treated within a limited space.

New Ward for Tuberculous Patients.

There is still need also of a separate building for patients, both men and women, suffering from tuberculosis, and of an isolation ward for sporadic cases of other infectious diseases. It has been suggested that one way of solving the difficulty of enlarging the hospital would be by adding a separate wing for tuberculous patients, thus relieving the other wards of the hospital.

New Mortuary.

There is an increased and urgent need of a new mortuary. The medical staff of the hospital find the present building entirely inadequate, and have repeatedly urged that some provision should be made by which autopsies can be performed in a well-lighted and properly-heated room. The Trustees would recommend the erection of a stone or brick mortuary adjoining one wing of the hospital.

Enlargement of Kitchen and Laundry.

Additional laundry and kitchen facilities are required. With a population of between eight and nine hundred inmates, two hundred and fifty of whom are hospital cases, a large amount of washing must be done, and the present laundry is cramped in space and inconvenient in arrangement. We recommend that the present rear wing of the men's building be remodelled and enlarged in such a way as to provide proper arrangements for kitchen, laundry, bakery and cold storage. At the same time much needed changes

could be made in the engine-room and boiler-room now located in this wing of the men's building. We also recommend that a suitable system of ventilation be introduced into the men's building.

Condition of Buildings.

It is our duty to inform your Honor that in the near future it may become advisable to move one of the main buildings at Long Island, because of the encroachment of the sea, which is slowly undermining the bank on which it stands.

The hospital and women's dormitory, finished externally in cement plastering, have this year required, and will hereafter require, frequent repairs, necessitating a considerable annual outlay.

The existing plant for furnishing the heat, light and ventilation of the buildings at Long Island is inadequate to the demands made upon it. It will be necessary during the coming year to make some radical changes in the methods of heating and ventilating the buildings, and for this purpose additional electric power will be required.

Wharves.

The wharves at Long Island should be extended in order to make them perfectly safe for boats to land at any time, and also to secure additional storage room for coal.

Additional Officers.

The Trustees are of the opinion that in order to improve the general character of the institutions at Long Island, there must be a slight increase in the number of officers required to take charge of the in-door and out-door work. While under the former management prisoners under the care of an officer were detailed to do this work, all such work is now done by inmate labor, and it is necessary, in order to secure the best and most efficient results from this form of labor, that there should be a sufficient number of experienced officers to direct it.

Hospital Service.

There is also need of a slightly increased force of nurses in the training-school to enhance its efficiency and make it of greater value to the hospital. The influence of the training-school is noticeable in the degree of cleanliness, which is higher than formerly, and in the attention to small details, which now come under the care of women, instead of men.

The idea that an almshouse hospital should be conducted on any different lines from other hospitals is fast disappearing. Whether dependent or independent, sick persons should receive the best possible care, and it is better economy, as well as better humanity, to insist that the standard of an almshouse hospital shall be as good as that of other hospitals. Not only is the benefit to the patients important, but it is of positive service to the community to establish a proper standard of nursing, without regard to the circumstances of the patient for whom it provides.

FIRE PROTECTION.

The present facilities for dealing with fire on Long Island are totally inadequate, and the question of proper defence against fire should be considered immediately. It appears that a salt-water service would furnish the best protection, and we urgently recommend that steps be taken to secure this service at the earliest practicable moment.

SUMMARY.

In entering upon their first full year of work, the Trustees hope still further to improve the institutions of which they are in charge. It is their earnest desire to raise the standard and improve the quality of the service, and to increase the efficiency of the work done, in the belief that with good buildings and proper superintendence the city should be able to provide in a thoroughly satisfactory manner for its dependent poor. One radical change contemplated by the Board may be referred to here, namely, that the almshouse in Charlestown shall, as soon as expedient, be made an almshouse for women only, and for such aged couples as can be sent there. The number of women in that institution is almost double the number of men, and it is proposed, by making it an almshouse for women only, to secure a more thorough classification than is now possible.

The Trustees have asked the city for a somewhat increased appropriation to enable them to carry on the work of the pauper institutions in a fitting and creditable manner, and it is hoped that during the coming year the improvements which have been indicated in this report may be made, and that others which naturally suggest themselves in connection therewith may be initiated.

The following changes, already made, are hereby reported:

1. Discontinuance of prison labor on Long Island.
2. Employment and better classification of inmates.

3. The making and baking of bread at Long Island and at Charlestown.
4. Purchase of supplies by the Superintendents.
5. Increase of milk supply at Long Island.
6. Employment of paid help in kitchen at Long Island.
7. Readjustment of books and accounts.

The following recommendations are made:

1. Additional kitchen and laundry accommodations.
2. Increase of electric plant.
3. Ventilation of men's building.
4. Better wharf accommodations.
5. A new piggery.
6. The employment of more paid officers.
7. The extension of the training-school.
8. A new male ward in the hospital.
9. An isolating ward for contagious diseases.
10. The erection of new mortuary.
11. The Almshouse at Charlestown to be for women only.
12. Adequate means for fire-protection.

Respectfully submitted,

WILLIAM T. SEDGWICK,
ALICE N. LINCOLN,
WILLIAM H. GRAINGER, M.D.,
WILLIAM L. RUTAN,
SARAH E. FALLON,
FRANCES R. MORSE,
WALTER HUNNEWELL.

FINANCIAL STATEMENT.

EXPENDITURES FOR ALMSHOUSE AND HOSPITAL, LONG ISLAND, 1897-98.

Salaries :

Dr. Chas. H. Cogswell, Superintendent, to April 7, 1897, inclusive,	\$777 76	
Dr. L. F. Wentworth, Superintendent, from April 9, 1897	1,715 24	
Employees	17,256 68	

\$19,749 68

Subsistence supplies for officers and inmates,	30,646 29
Fuel	6,663 44
Clothing and bedding	5,575 69
Repairs and alterations	4,781 35
Furniture and household supplies	3,943 56
Medical supplies and surgical instruments	\$2,431 29
Liquors	842 67

3,273 96

Thirty-two cows, two bulls, feed for animals and agricultural supplies	3,146 68
Water-rates	2,500 00
Tobacco and snuff	1,006 02
Soap and laundry supplies	967 33
Stationery	499 03
Oils	378 06
Burial expenses	277 32
Telephone service	184 25
Ice	140 00
Printing	120 47
Advertising	110 85
Religious services	53 40
Freight and transportation	35 41
Expert work on dietary	32 45
Entertainment for inmates	12 50

\$84,097 74

EXPENDITURES FOR ALMSHOUSE, CHARLESTOWN, 1897-98.

Salaries :		
Chandler Eastman, Superintend-		
ent	\$1,245 83	
Employees	1,370 67	
		\$2,616 50
Subsistence supplies for officers and inmates .		5,390 84
Fuel		1,617 55
Clothing and bedding		971 14
Horse, wagon and cow, feed for animals and		
agricultural supplies		817 74
Repairs and alterations		771 46
Water-rates		382 32
Furniture and household supplies		360 25
Soap and laundry supplies		223 27
Gas		190 81
Telephone service		168 75
Medical supplies	\$76 20	
Liquors	84 23	
		160 43
Tobacco and snuff		144 33
Cartage		60 23
Services of expert accountant		50 00
Travelling expenses		41 70
Stationery		41 48
Oils		36 48
Ice		35 16
Entertainment for inmates		24 50
Burial expenses		20 00
Rent of gas-regulator		17 60
Printing		11 21
Expert work on dietary		6 94
Gratuities		4 37
		\$14,165 06

EXPENDITURES FOR "PAUPER EXPENSE."

Support outside city institutions	\$2,103 42
Transportation and travel	11 00
Pay-rolls	119 99
Books, printing and stationery	43 80
Office-fittings	92 50
Total	\$2,370 71

RECAPITULATION OF EXPENDITURES.

Almshouse and Hospital, Long Island . . .	\$84,097 74
Almshouse, Charlestown	14,165 06
Pauper expense	2,370 71
Total	<u>\$100,633 51</u>

ACCOUNTS DEPOSITED WITH CITY COLLECTOR ON ACCOUNT
OF INCOME OF THE INSTITUTIONS FOR THE YEAR END-
ING JANUARY 31, 1898.

Almshouse and Hospital, Long Island.

Board of patients	\$2,707 28
Teaming	22 75
All other items	5 20
	<u>\$2,735 23</u>

Almshouse, Charlestown.

Board of patients	\$269 58
Empty barrels	12 50
	<u>282 08</u>
Total	<u>\$3,017 31</u>

COMPARISON OF ACCOUNT DEPOSITED WITH CITY COL-
LECTOR ON ACCOUNT OF INCOME FOR THE YEARS
ENDING JANUARY 31, 1897 AND 1898.

	January 31, 1897.	January 31, 1898.	Increase.	Decrease.
Almshouse and Hospital, Long Island	\$2,097 87	\$2,735 23	\$637 36	
Almshouse, Charlestown ..	386 84	282 08	.....	\$104 76
Totals	\$2,484 71	\$3,017 31	\$637 36	\$104 76

COMPARISON OF EXPENDITURES OF THE INSTITUTIONS
FOR THE YEARS ENDING JANUARY 31, 1897 AND
1898.

(Cost of Support of Persons in Almshouses outside of the City of Boston
not included.)

	Expenditure for 12 months.		Increase.	Decrease.
	Ending Jan. 31, 1897.	Ending Jan. 31, 1898.		
Almshouse and Hos- pital, Long Island...	\$92,491 26	\$84,097 74	.....	\$8,393 52
Almshouse, Charles- town	15,115 93	14,165 06	.....	950 87
Totals	\$107,607 19	\$98,262 80		\$9,344 39

COMPARISON OF ACTUAL COST OF INSTITUTIONS FOR THE
YEARS ENDING JANUARY 31, 1897 AND 1898.

	1897.	1898.			
	Actual Cost.	Expended.	Actual Income.	Actual Cost.	Decrease.
Almshouse and Hospital, Long Island	\$90,829 97	\$84,097 74	\$2,041 83	\$82,055 91	\$8,774 06
Almshouse, Charlestown,	14,686 07	14,165 06	24 07	14,140 99	545 08
Totals	\$105,516 04	\$98,262 80	\$2,065 90	\$96,196 90	\$9,319 14

Number of persons supported by the city of Boston in
almshouses outside the city of Boston, 61.*

THE AVERAGE EXPENDITURE FOR AND ACTUAL COST
OF EACH INMATE OF THE INSTITUTIONS FOR THE
YEAR ENDING JANUARY 31, 1898.

	EXPENDITURE.		ACTUAL COST.	
	Per Year.	Per Week.	Per Year.	Per Week.
Almshouse and Hospital, Long Island	\$122 06	\$2 35	\$119 09	\$2 29
Almshouse, Charlestown..	102 65	1 97	102 47	1 97

* Expended for support of same, \$2,370.71. (See page 10.)

NUMBER OF INMATES REMAINING IN THE INSTITUTIONS
JANUARY 31, 1897 AND 1898.

	January 31, 1897.	January 31, 1898.	Increase.	Decrease.
Almshouse and Hospital, Long Island.....	815	853	38	
Almshouse, Charlestown..	145	140	.....	5
Total	960	993	38	5

AVERAGE NUMBER OF INMATES DURING THE YEARS
ENDING JANUARY 31, 1897 AND 1898.

	1897.	1898.	Increase.	Decrease.
Almshouse and Hospital, Long Island.....	706	689	.....	17
Almshouse, Charlestown..	148	138	.....	10
Total	854	827		27

EMPLOYEES AND SALARIES PAID AT THE BOSTON
ALMSHOUSE AND HOSPITAL, LONG ISLAND,
ON JANUARY 15, 1898.

	Name.	Rank.	Salary per Month.
1.	L. F. Wentworth .	Superintendent . . .	\$208 33
2.	A. H. Hopkins .	Deputy Superintendent Institution	83 33
3.	C. M. Hutchinson .	Deputy Superintendent Hospital	83 33
4.	A. A. Taft . . .	Physician	62 50
5.	Chas. A. Keucher .	Apothecary	60 00
6.	Adelaide Donohoe .	Organist	25 00
7.	J. J. Monroe . .	Clerk	50 00
8.	Geo. H. Shepard .	Engineer	75 00
9.	Walter B. Nichols .	Assistant Engineer . .	40 00
10.	Robt. Barclay . .	" "	35 00
11.	E. L. Bryant . .	Farmer	50 00
12.	L. H. Pingree . .	Assistant farmer . . .	30 00
13.	Chas. W. Hilton .	" "	25 00
14.	Chas. Newell . .	Receiving officer . . .	35 00
15.	A. W. Davidson .	Store-keeper	30 00
16.	Nelson H. Lane .	Relief officer	30 00
17.	T. W. Kendall . .	Carpenter	40 00
18.	P. J. Cunningham .	Baker	50 00
19.	R. A. Chase . . .	Cook	40 00
20.	Mary A. White . .	"	25 00
21.	Christena McInnis .	"	25 00
22.	Mary McIsaacs . .	"	25 00
23.	Sidney Horner . .	Assistant cook	25 00
24.	Annie R. Bryant .	" "	15 00
25.	Jno. J. Galvin . .	Watchman	20 00
26.	Wm. Alexander . .	"	20 00
27.	Thos. E. Murphy .	Laundry officer	25 00
28.	Belle Devlin . . .	Laundress	20 00
29.	Mary A. Riley . .	"	16 00
30.	Maud Devlin . . .	"	16 00
31.	Katrina Leublad .	Housemaid	15 00
32.	Mary A. Morris . .	Superintendent of Nurses,	58 33
33.	C. A. Brown . . .	Assistant Superintendent of Nurses	30 00
34.	Eliza Barker . . .	Night nurse	30 00
35.	Sarah L. Gray . .	Head nurse	25 00
36.	Harriet Towse . .	" "	25 00
37.	Edith Sprott . . .	" "	25 00
38.	M. E. Travis . . .	" "	25 00

	Name.	Rank.	Salary per Month.
39.	J. A. Greenwood . . .	Male nurse	20 00
40.	J. H. Brown . . .	" " helper	5 00
41.	M. E. Armstrong . .	Matron	25 00
42.	W. E. S. Constantine, .	"	20 00
43.	Margaret J. Chisholm, .	"	20 00
44.	M. B. Runyan . . .	Night matron	20 00
45.	Margaret A. Kelly . .	Nurse	10 00
46.	Bessie E. Stevens . .	"	10 00
47.	Mary L. Fenton . . .	"	10 00
48.	Winifred Dillon . . .	"	10 00
49.	Agnes M. Gaul . . .	"	10 00
50.	Marian L. Gilman . . .	"	10 00
51.	Mary B. Wells . . .	"	10 00
52.	Mary F. Daley . . .	"	10 00
53.	Rebecca M. Sullivan, .	"	10 00
54.	Delia J. Riley . . .	"	10 00
55.	Kate B. McAdams . . .	"	10 00
56.	Julia Kelliher . . .	"	10 00
57.	Myretta Waitte . . .	"	10 00
58.	Lillian Queenan . . .	"	10 00
59.	Annie R. Gordon . . .	"	10 00
60.	Elsie Young	"	10 00
61.	Helen M. Dwyer . . .	"	10 00
62.	Sarah E. McGowan, . .	"	10 00
63.	Florence F. Wilson, . .	"	10 00
64.	Margaret L. Corbet, . .	"	10 00
65.	Gustena Getchell . . .	"	10 00
66.	Catherine F. Barlow, . .	"	10 00
67.	Margaret J. Crane . . .	"	10 00
68.	Annie O'Connor . . .	"	10 00
69.	Christena Chisholm, . .	"	10 00
70.	Catherine Berry . . .	"	10 00
71.	Priscilla McKenzie . .	"	10 00

EMPLOYEES AND SALARIES PAID AT THE CHARLES-
TOWN ALMSHOUSE ON JANUARY 15, 1898.

	Name.	Rank.	Salary per Month.
	Chandler Eastman . . .	Superintendent	\$108 34
	Rufus W. Sprague. . .	Physician	46 66
	Sarah H. Walker . . .	Matron	20 00
	Ellen Mahoney	"	20 00
	Mary Furlong	"	18 00
	Nellie O'Keef	Cook	18 00
	Thos. White	Baker	15 00

REPORT OF THE SUPERINTENDENT OF LONG ISLAND.

LONG ISLAND, BOSTON HARBOR, February 1, 1898.

To the Pauper Institutions Trustees:

The report of this institution for the year ending January 31, 1898, is hereby respectfully submitted.

The year has been fraught with many changes in persons and methods, bringing to the work many who were new to the institution and to each other, and the period has thus brought unusual demands for organization. I assumed charge of the institution April 7, 1897, and on the 12th of the same month Mr. A. H. Hopkins was transferred from the House of Correction, South Boston, to the position of Deputy Superintendent, succeeding Mr. W. F. Clark who had resigned to take charge of the quarantine station at Gallop's Island.

THE WORK OF THE YEAR.

The general condition of all departments of the institution has been kept up to the former standard and the effort to better systematize the work has been productive of good results, although much must yet be done.

One of our most marked changes of policy has been the discontinuance of prison labor from Deer Island and the substitution therefor of inmate labor in the departments where prisoners were formerly employed. The change came at a critical time for the farm, but by an extra effort on the part of the officers the substitution was successfully made. The number of able-bodied men in the institution during the summer months is very small, and we were obliged to draw upon the elderly men to care for the crops. There was at first a decided reluctance to work, but this was gradually overcome, and before the season was over the habit of industry had gained considerable ground in supplanting habitual idleness. It has unquestionably been easier to get our men to work since the prisoners were taken away. Certainly results have justified the change made by the trustees in this particular.

Believing that self-dependence demanded that we should supply our own bread, we discontinued on September 1 the

use of bread from Deer Island, and began to do our own baking. While we do not wish to appear ungracious, we must, in justice to ourselves, claim that we are able to supply our tables with a much better loaf than that formerly used, and one frequent cause of complaint has thus been done away with. No change made has given our inmates so general satisfaction as that in the matter of bread supply. We employ one baker, and he is assisted by inmate helpers. The dormitory oven, six by seven feet in size, has done our work so far, but it is too small, and more adequate facilities must be supplied at an early date.

A new house was built on the back wharf in which the crew of the steamer "John Howard" were quartered during the summer and fall, but it being impossible to make the men comfortable there during the winter they have been brought to the larger cottage.

The smaller cottage has been put in excellent repair and lighted with electricity, and is occupied by the engineer and his family.

The lumber in the unused vegetable cellar has been used for the construction of a model poultry house, and we refer with defensible pride to this new feature in the farm department. The electrical wiring of the institution has been completed, and the fire-alarm system referred to in the last report is fully installed.

The upper front room on the westerly side of the women's building has been taken for a nursery for the larger children and their mothers. The latter are detailed to work in the hospital and industrial departments, and visit their children at stated hours. During their absence the children are cared for by the old ladies. This change has worked a marked relief for the hospital lying-in department.

The book-keeping of the Pauper Department was brought to this institution December 1, and Mr. James J. Monroe, who had been promoted from receiving officer to the clerkship of the institution, took charge of the work. The office has been thoroughly renovated, neatly carpeted with linoleum, and provided with a large safe. Since the separation of the institutions was effected, the superintendent has been the purchasing agent. This has added largely to his work, but the advantages of the present method more than offset the extra labor.

During the months of July and August the excursions under the Randidge Fund were directed to this island, and a camping-ground was established on the pasture land on the westerly side of our estate. Should these parties come to

this island again, provision for landing at some other point than the front wharf should be made, in order that the children may be kept away from the institution. The camp-ground should also be independently supplied with water. During the past season our institution felt a decided burden in hauling water at inconvenient hours to supply the large number of excursionists.

Wards F, H and K in the hospital have been provided with steam wall-coils to supply direct radiation, thus diminishing the demands upon the already overloaded electrical plant, and serving to keep these wards much more comfortable in extreme weather.

The electrical plant has been further relieved by placing a 20-horse-power steam-engine in the laundry which supplies all the power for this department.

The wooden sinks have been removed from the institution and hospital kitchens, and heavy cast-iron sinks have been put in their places.

The kitchens have also been equipped with new tinware in which to serve the food to the dining-rooms, doing away with the wooden "carryalls" formerly used.

Inmates.

The class of inmates admitted has not materially changed from those coming in previous years. Most of those coming to us are addicted to the drink habit, and the "old rounder" is a prominent figure in our winter population. The writer believes there is no good reason, except in very isolated cases, why a man under fifty years of age and in good health should go to an almshouse, and he believes there is something radically wrong in a system which permits the professional impostor to thrive at the expense of the worthy poor. The two classes should be separated, and the former committed to an established workhouse.

A good degree of discipline has been maintained, and punishment has been made only a last resort. The cells have been used sixty times, twenty-three of which punishments occurred during the first two months of the year. The cells for women have been removed to a light, well-ventilated portion of the dormitory basement, so partitioned off that more decided isolation can be secured.

Farm.

The farm has been the scene of activity during the year, and we hope to bring it to a high standard during the coming season.

Tuberculosis has continued to invade our herd, and in April all but six of our cows were killed by order of the Cattle Commissioners. Upon post-mortem examination, however, eight of the seventeen last killed were found to be non-tuberculous. The herd has been replenished by purchases, so that we now have twenty-seven head of milch cows.

The stables have been kept thoroughly whitewashed, the hog pens have been removed from the cellar of the barn, and a satisfactory state of sanitation about the farm has been enforced.

In order to efficiently carry on the farm work there should be considerable additions to the equipment of teams and tools.

I refer you to the appended tables for a report of the farm products.

Hospital.

The hospital has steadily improved during the year. The resident staff has been attentive and efficient, and through the training-school there has been an improvement in the nursing.

Dr. C. M. Hutchinson, Deputy Medical Superintendent continues in immediate charge of the hospital, and Dr. Albert A. Taft succeeded Dr. Dunlap as assistant, the latter taking a position in the City Hospital. Dr. W. H. Gallagher is senior, and Dr. David J. Johnson junior interne.

On April 2, 1897, Miss Mary A. Morris, a nurse of long experience, was made Superintendent of Nurses, and has faithfully performed her duties.

There are now twenty-five pupils in the school. The course has been lengthened to two years.

The following nurses have graduated after a one-year course.

Florence McDonald,
Catherine McDonald,
Clara A. Reed,
Bessie F. Leonard,
Georgie Lynch,

Margaret J. Chisholm,
Daisy Storey,
Edith M. Rose,
Ermine Mercier.

During the early portion of the year the hospital was considerably embarrassed by the presence of several demonstrative and otherwise troublesome insane patients. Acting upon the theory that these cases should be under the special care and treatment afforded by the institutions for the insane, they were committed to lunatic hospitals. In all, twenty-three cases of this character have been so disposed of. I am mindful of the increase of pauper expense occasioned by these transfers, but I submit that this is a secondary

consideration, when we recognize that by their detention here the patients were deprived of the special treatment provided for their form of disease, and that their presence seriously embarrassed the treatment of our patients, and in several instances menaced the personal safety of inmates. We still have several mental cases, mostly congenitally deficient or terminal dements.

The visiting medical and surgical staff have continued their regular visitations, and their valuable services are most cordially recognized.

RECOMMENDATIONS.

The following recommendations are made:

1. That a wing be added to the men's side of the hospital with a special view to caring for the specific and phthisical cases. This wing should have a large proportion of single rooms; should have toilets, baths and linen closets, and should provide a suitable room for the treatment of men out-patients.

2. The recent presence of two cases of diphtheria emphasizes the necessity of providing for contagious diseases. Should an epidemic occur we have no place in which to properly care for the cases. Wards for contagious cases should be provided both for men and women at an early day.

3. Additional single rooms should be provided for both men's and women's wards of the hospital.

4. New plumbing fixtures for the toilets in the hospital, and wards of the men's institution, should be supplied.

5. To properly care for the dead, it is essential that a new morgue with its proper equipment should be built at once, that it may be had for use the coming summer.

6. The hospital kitchen should be enlarged, a freight elevator provided, and all of the kitchens should have additional steam-cooking apparatus.

7. The old refrigerators in the basement of the institution should be discarded, and an efficient cold-storage plant installed conveniently near the kitchen.

8. I earnestly recommend the building of a new laundry, to be equipped with modern machinery. This provision would afford an opportunity to locate the bakery and kitchen cold storage in the room now occupied by the laundry.

9. The health of the inmates of the men's building demands that the ventilation of this part of the institution shall be no longer delayed.

10. The recommendation in previous reports that a new "tie up" for cattle should be built is here repeated.

11. An appropriation should be made for the construction of a modern piggery to succeed the makeshift we are now using.

12. In order to efficiently meet repairs and keep up improvements we should have a new carpenter's shop and a moderate equipment of machinery. This would allow the present small building used by the carpenter to be taken for a paint shop.

Your attention is directed to the statistical tables for the usual tabulated statements.

Religious services have been held regularly on every Sunday, and the spiritual needs of the inmates have been tenderly regarded by Rev. W. B. Toulmin and Rev. Fr. Brennan.

We thankfully recognize that Beneficent Providence which has shielded us from any serious calamity during the year.

I take this opportunity to acknowledge the co-operation of the heads of the different departments in forwarding the interests of the institution, and I thank them and all employees for the assistance they have rendered. I wish also to here record my appreciation of the many courtesies and helpful counsels of the Commissioner during the portion of the year's service under him.

To your Board I make grateful acknowledgment of the measure of confidence shown in my administration of the affairs of the institution, and I heartily thank you for your ready and unvarying support.

Respectfully submitted,

LOWELL F. WENTWORTH,

Superintendent.

TABLE SHOWING MOVEMENT OF POPULATION.

	Male.	Female.	Total.
Remaining January 31, 1897 . .	488	327	815
Admissions including births . .	625	395	1,020
Whole number supported . .	1,113	722	1,835
Discharges, including deaths . .	612	364	976
Absent on leave	5	1	6
Whole number of removals . .	617	365	982
Remaining January 31, 1898 . .	496	357	853
Deaths	62	83	145
Births	10	7	17
Largest number present	512	363	875
Smallest " "	247	305	552
Average " daily	363	326	689

TABLE SHOWING TOTAL ADMISSIONS, DAILY AVERAGE,
ETC., FOR PAST NINE YEARS.

YEAR.	Total Admissions.	First Admissions.	Number Remaining at Date of Annual Report.	Daily Average.
1889.....	1,273	....	847	816
1890.....	1,154	332	862	746
1891.....	1,273	453	926	813
1892.....	1,352	441	992	812
1893.....	1,705	379	919	728
1894.....	1,951	364	960	806
1895.....	1,501	352	815	693
1896.....	1,310	385	853	706
1897.....	1,020	381	853	689

AVERAGE MONTHLY POPULATION.

February, 1897	.	.	.	.	.	.	851
March, "	.	.	.	.	.	.	786
April, "	.	.	.	.	.	.	633
May, "	.	.	.	.	.	.	591
June, "	.	.	.	.	.	.	568
July, "	.	.	.	.	.	.	610
August, "	.	.	.	.	.	.	601
September, "	.	.	.	.	.	.	583
October, "	.	.	.	.	.	.	636
November, "	.	.	.	.	.	.	725
December, "	.	.	.	.	.	.	806
January, 1898	.	.	.	.	.	.	855
Monthly average	.	.	.	.	.	.	687

AGES OF PERSONS ADMITTED.

Ages.		Male.	Female.	Total.
Under twenty years	.	20	19	39
Twenty to thirty "	.	66	35	101
Thirty to forty "	.	177	51	228
Forty to fifty "	.	205	75	280
Fifty to sixty "	.	83	82	165
Sixty to seventy "	.	51	76	127
Seventy to eighty "	.	28	35	63
Eighty to ninety "	.	4	13	17
Total	.	634	386	1,020

OCCUPATIONS OF PERSONS ADMITTED.

Men.

Bakers	3	Broom-maker	1
Barbers	4	Butchers	5
Bartenders	5	Cabinet-makers	3
Bellboys	2	Car inspector	1
Blacksmiths	5	Carpenters	5
Blacksmith helpers	2	Carriage-makers	3
Boiler-makers	2	Carriage-trimmer	1
Bottler	1	Cigarmaker	1
Book agent	1	Clerks	8
Bookbinders	2	Cooks	5
Brakemen	4	Coopers	2
Brass-moulders	2	Curriers	6
Bricklayers	2	Dancing-master	1

Drug clerk . . .	1	Sashmaker . . .	1
Engineers . . .	2	Seamen . . .	14
Errand boys . . .	2	Machine operators . . .	4
Expressman . . .	1	Shoemakers . . .	11
Farm hand . . .	1	Silver-platers . . .	2
Firemen . . .	7	Stewards . . .	2
Fishermen . . .	2	Stone-cutters . . .	6
Foreman . . .	1	Stone-masons . . .	8
Furniture finishers . . .	4	Storekeeper . . .	1
Gardeners . . .	3	Switchman . . .	1
Gasfitter . . .	1	Tailors . . .	8
Glassblower . . .	1	Teamsters . . .	52
Glasscutters . . .	2	Telegraph operators . . .	2
Hack drivers . . .	2	Timekeeper . . .	1
Harness-makers . . .	3	Tinsmiths . . .	3
Hatter . . .	1	Trunkmaker . . .	1
Hostlers . . .	6	Upholsterer . . .	1
Iron-moulders . . .	3	Variety actor . . .	1
Iron-worker . . .	1	Veterinary surgeon . . .	1
Janitor . . .	1	Waiters . . .	3
Jigsawyer . . .	1	Watchmakers . . .	2
Junk dealer . . .	1	Whitewashers . . .	2
Laborers . . .	230	Wood-carver . . .	1
Lather . . .	1	Wood-finisher . . .	1
Machinists . . .	3	OCCUPATIONS OF WOMEN.	
Marble-workers . . .	4	Bookbinder . . .	1
Mattress-maker . . .	1	Book-keepers . . .	2
Mill-hand . . .	1	Carpet-printer . . .	1
Morocco-dresser . . .	1	Cigarmaker . . .	1
News agent . . .	1	Cooks . . .	32
Nurse . . .	1	Decorator . . .	1
Painters . . .	24	Factory hands . . .	3
Paper-hanger . . .	1	Housework . . .	275
Paper-ruler . . .	1	Laundresses . . .	23
Pedlers . . .	3	Nurses . . .	2
Piano-polishers . . .	3	Peddler . . .	1
Plumbers . . .	4	Printer . . .	1
Plumbers-helper . . .	1	Rag-sorter . . .	1
Pressman . . .	1	Saleswomen . . .	2
Printers . . .	7	Scrubbing . . .	3
Plasterers . . .	3	Seamstresses . . .	13
Ropemakers . . .	3	Waitresses . . .	2
Roofers . . .	2	Weaver . . .	1
Rubber-cutter . . .	1	No occupation . . .	30
Salesmen . . .	3		

ARTICLES MANUFACTURED IN SEWING-ROOMS.

Aprons	1,412	Nightcaps	362
Bags, clothes	300	Overalls	180
Bags, tea	54	Petticoats	993
Bedticks	105	Pillowslips	850
Blankets, babies'	157	Pillowticks	124
Chemises	369	Screen covers	36
Dresses	891	Shawls, shoulder	378
Gowns, operating	16	Sheets	1,227
Gowns, night	492	Shirts	1,026
Hose, pairs	224	Shrouds	43
Holders	36	Suspenders	313
Jumpers	98	Tablecloths	65
Mattresses	15	Towels	729
Napkins, babies'	4,372	Waists	306
Napkins, table	72		

In addition to the above, articles of bedding, clothing and boots and shoes have been *repaired* to the number of 30,600.

PRODUCTS OF THE FARM.

Beets	85 bushels.
Beets, Mangel-wurzel	940 "
Beet Greens	53 "
Carrots	438 "
Cucumbers	24 "
Onions	650 "
Parsnips	254 "
Peas	121 "
Peppers	1½ "
Potatoes	100 "
String Beans	48 "
Tomatoes	52 "
Turnips	346 "
Hay	100 tons.
Corn fodder	60 "
Squash	2 "
Cabbage	9,350 heads.
Cauliflower	107 "
Celery	2,735 "
Lettuce	1,360 "
Sweet corn	2,250 dozen.
Milk	57,839 quarts.
Pork	10,969 lbs.

HOSPITAL STATISTICS.

MOVEMENT OF POPULATION.

	Males.	Females.	Total.
Remaining in Hospital January 31,			
1897	82	164	246
Admitted during year	305	409	714
Total number under treatment	387	573	960
Discharged	235	343	578
Died	62	83	145
Remaining January 31, 1898	90	147	237
Largest number in hospital			281
Smallest " " "			233
Daily average			259
Births			17
Number of inmates treated as out-patients			883

MEDICAL AND SURGICAL STATISTICS.

Classified according to the Nomenclature of Diseases as published by the Royal College of Physicians of London, and American Medical Association.

DISEASES.	In Hospital, Jan. 31, 1897.	ADMITTED.			DISCHARGED.			DIED.		In Hospital, Feb. 1, 1898.
		Males.	Females.	Total.	Well.	Relieved.	Unrelieved.	Males.	Females.	
GENERAL DISEASES.										
Morphine habit.....	....	2	1	3	....	2	....	....	....	1
Malaria.....	1	7	....	8	7	1	....	....	....	....
Pertussis.....	....	1	....	1	1	....	....	....	....	....
Diphtheria .....	....	2	1	3	3	....	....	....	....	....
Debility, general.....	29	....	36	65	5	57	....	....	....	3
" senile.....	60	10	21	91	....	55	3	....	10	23
Arthritis, deformans.....	1	....	3	4	....	....	....	1	....	3
" chronic osteo.....	....	....	1	1	....	....	....	....	....	1
Lumbago.....	....	2	2	4	2	1	....	....	....	1
Rheumatism, acute	1	9	5	15	10	3	....	....	....	2
" chronic.....	2	8	13	23	....	12	....	....	1	10
Phthisis, pulmonary.....	20	52	24	96	....	23	8	22	14	29
Tuberculosis, acute.....	....	1	1	2	....	....	....	1	1	....
" general.....	....	4	....	4	....	....	....	4	....	....
Typhoid fever.....	....	1	3	4	2	....	....	1	1	....
Fibricula.....	....	1	1	2	2	....	....	....	....	....
Anæmia.....	....	2	1	3	....	2	....	....	....	1
Alcoholism.....	....	16	7	23	22	....	....	1	....	....

DISEASES.	In Hospital, Jan. 31, 1897.	ADMITTED.			DISCHARGED.			DIED.		In Hospital, Feb. 1, 1898.
		Males.	Females.	Total.	Well.	Relieved.	Unrelieved.	Males.	Females.	
Septicæmia.....		1	1	2	.....	.....	.....	1	1	.....
Influenza.....		2	7	9	9	.....	.....	.....	.....	.....
Purpura hæmorrhagica.....		1	.....	1	1	.....	.....	.....	.....	.....
Varicella.....		9	6	15	15	.....	.....	.....	.....	.....
Diabetes mellitus.....		.....	3	3	.....	2	.....	.....	1	.....
NERVOUS SYSTEM.										
Anterior poliomyelitis.....	1	.....	.....	1	.....	1	.....	.....	.....	.....
Facial paralysis.....		1	1	2	.....	1	.....	.....	.....	1
Chorea.....		.....	1	1	.....	1	.....	.....	.....	.....
Masturbation.....		.....	2	2	.....	1	.....	.....	.....	1
Epilepsy.....	5	10	4	19	.....	14	3	.....	.....	2
Hysterio epilepsy.....	1	.....	.....	1	.....	.....	.....	.....	.....	1
Jacksonian ".....		2	.....	2	.....	2	.....	.....	.....	.....
Hemiplegia.....	8	5	21	34	.....	.....	2	.....	10	22
" syphilitic.....		.....	1	1	.....	.....	.....	.....	.....	1
Post Typhoid neuritis.....		1	.....	1	.....	.....	.....	.....	.....	1
Multiple ".....	3	.....	2	5	1	1	1	.....	.....	2
Paralysis agitans.....	5	1	1	7	.....	.....	.....	1	.....	6
Lateral sclerosis.....		3	.....	3	.....	.....	1	.....	.....	2
Tabes dorsalis.....	3	6	1	10	.....	2	.....	.....	.....	8
Myelitis transversed.....		2	1	3	1	.....	1	.....	.....	1
" compression.....		.....	1	1	.....	.....	1	.....	.....	.....
" disseminated.....		1	.....	1	.....	1	.....	.....	.....	.....
Neuralgia facial.....		3	1	4	4	.....	.....	.....	.....	.....
Hysteria.....	2	.....	1	3	.....	1	2	.....	.....	.....
Ataxia paraplegia.....	1	1	1	3	.....	.....	.....	.....	1	2

DISEASES.	In Hospital, Jan. 31, 1897.	ADMITTED.			DISCHARGED.			DIED.		In Hospital, Feb. 1, 1898.
		Males.	Females.	Totals.	Well.	Relieved.	Unrelieved.	Males.	Females.	
Delirium tremens.....		2	....	2	2	....	....	....	....	....
Progressive muscular atrophy.....		1	....	1	....	....	....	....	....	1
Glosso-labio-laryngeal paralysis.....		1	....	1	....	....	1	....	....	....
Hemicrania.....		1	....	1	....	1	....	....	....	....
Sciatica.....		2	1	3	1	1	....	....	....	1
Neurasthenia.....		1	....	1	....	1	....	....	....	....
Cerebro-spinal-meningitis..		1	....	1	....	....	....	1	....	....
INTELLECT.										
Monomania.....		....	1	1	....	....	1	....	....	....
Dementia.....	1	8	9	18	....	3	13	....	1	1
“ senile.....	6	3	7	16	....	....	4	2	5	5
Epileptic insanity.....		....	1	1	....	....	1	....	....	....
Idiot.....	6	....	....	6	....	....	4	....	....	2
Acute mania.....		....	1	1	....	....	1	....	....	....
General paralysis.....	1	4	....	5	....	....	1	2	....	2
Post paralytic insanity.....		....	1	1	....	....	1	....	....	....
Hysterical insanity.....		....	1	1	....	....	1	....	....	....
CIRCULATORY SYSTEM.										
Mitral regurgitation.....	11	9	13	33	....	22	....	1	4	6
“ stenosis.....		3	5	8	....	....	1	4	3	....
Aortic regurgitation.....	9	2	3	14	....	11	1	....	....	2
“ stenosis.....		3	3	6	....	3	....	1	....	2
Arterio sclerosis.....		3	4	7	....	2	....	....	3	2
Pericarditis.....		....	2	2	....	1	....	....	1	....
Gonorrheal endocarditis....		1	....	1	....	1	....	....	....	....

DISEASES.	In Hospital, Jan. 31, 1897.	ADMITTED.			DISCHARGED.			DIED.		In Hospital, Feb. 1, 1898.
		Males.	Females.	Total.	Well.	Relieved.	Unrelieved.	Males.	Females.	
DISEASE OF FAUCES.										
Tonsillitis.....			9	9	9					
RESPIRATORY SYSTEM.										
Laryngitis Tubercular		2	1	3			2			1
Malignant disease larynx.....			1	1					1	
LUNGS.										
Bronchitis acute.....	3	2	2	7	7					
“ chronic.....	4	7	11	22	1	15		1	1	4
Asthma	2	1	6	9		6			2	1
Hydro-thorax		1		1		1				
“ -pneumo-thorax		1		1		1				
Pneumo-thorax		1		1				1		
Broncho pneumonia		1	1	2				1	1	
Pneumonia		8	5	13	8	2	1		2	
Pleurisy.....		3	11	14		9		1	1	3
Emphysema		1	1	2		1	1			
DIGESTIVE SYSTEM.										
Gastritis alcoholic		1	1	2	2					
Dyspepsia		8	5	13	4	8				1
Diarrhoea, acute	1	19	40	60	56	4				
“ chronic	1	3		4					1	3
Colitis ulcerative			1	1		1				
Cholera infantum.....		5	1	6				4	1	1
Chronic constipation.....		6	3	9	6	3				
Cancer stomach.....	1	1	2	4				2	1	1
Enteritis		2		2				1		1
Dilated stomach		1	1	2						2

DISEASES.	In Hospital, Jan. 31, 1897.	ADMITTED.			DISCHARGED.			DIED.		In Hospital, Feb. 1, 1898.
		Males.	Females.	Total.	Well.	Relieved.	Unrelieved.	Males.	Females.	
LIVER.										
Gall-stones			1	1	....	....	....		1	....
Jaundice catarrhal.....	1	....	2	3	2	1	....	....		....
Cirrhosis . . . . .		....	1	1	....	....	....		1	....
Icterus neonatorum.....		....	2	2	1	....	....		1	....
Carcinoma . . . . .		....	1	1	....	....	....		1	....
URINARY SYSTEM.										
Nephritis chronic.....	2	14	5	21	....	3	2	6	3	7
Cystitis	2	5	1	8	....	4	...	1	1	2
Retention of urine		1	....	1	1	....	....	....	....	....
CUTANEOUS SYSTEM.										
Eczema . . . . .		....	1	1	1	....	....	....	....	....
Clavus . . . . .		....	1	1	1	....	....	....	....	....
Hypertrophic rosacea.....		....	1	1	....	....	....	....	....	1
Hyper labialis		1	....	1	1	....	....	....	....	....
DISEASES OF WOMEN.										
Lacerated cervix . . . . .		....	2	2	2	....	....	....	....	....
Cancer uterus	1	....	2	3	....	....	....		3	....
Prolapse "	1	....	1	2	....	....	1	....		1
Dysmenorrhœa	2	....	1	3	1	2	...	....	....	....
Pregnancy	3	....	21	24	21	....	....	....		3
Fibroid uterus.....		....	1	1	....	....	1	....	....	....
Ovarian cyst.....		....	3	3	....	....	2	....		1
Pruritus vulvæ . . . . .		....	2	2	1	....	....	....		1
Menorrhagia . . . . .		....	2	2	1	....	1	....	....	....
Recto-vaginal fistula . . . . .		....	1	1	....	....	1	....	....	....

DISEASES.	In Hospital, Jan. 31, 1897.	ADMITTED.			DISCHARGED.			DIED.		In Hospital, Feb. 1, 1898.
		Males.	Females.	Total.	Well.	Relieved.	Unrelieved.	Males.	Females.	
Vesico-vaginal fistula			1	1			1			
Pelvic inflammation			1	1	1					
Erosion cervix			2	2	2					
Mastitis			4	4	4					
Cystocele			1	1			1			
Rectocele			1	1			1			
Vulvitis			2	2	2					
Vulvo-vaginal abscess			1	1	1					
Endometritis			2	2	2					
Scabies		1	2	3	3					
Dermatitis			1	1						1
Psoriasis		3		3	2	1				
EAR.										
Otitis media		2	3	5		5				
Mastoiditis		1		1		1				
EYE.										
Ophthalmia gonorrhœal			1	1	1					
Tubercular eyeball			1	1			1			
Ulcer of cornea	1		3	4	3					1
Iritis		2	1	3	1	1				1
Cataract	2		1	3						3
Carcinoma			1	1						1
Conjunctivitis		3	4	7	7					
Lachrymal abscess			1	1	1					
Ecchymosis			2	2	2					

DISEASES.	In Hospital, Jan. 31, 1897.	ADMITTED.			DISCHARGED.			DIED.		In Hospital, Feb. 1, 1898.
		Males.	Females.	Total.	Well.	Relieved.	Unrelieved.	Males.	Females.	
SURGICAL.										
Hæmorrhoids.....	2	4	2	8	3	4	1			
Fistula in ano.....	1	3		4	1					3
Prolapse rectum.....	1		3	4			2			2
Ulcers, leg.....		2	7	9	5					4
“ varicose.....		4	6	10	5					5
Synovitis of knee.....			2	2	1	1				
Cellulitis leg.....	1			1	1					
Erysipelas.....		1	1	2	2					
Medio-tarsal tuberculosis...			1	1						1
Alveola abscess.....		1	1	2	2					
Necrosis tibia.....			2	2			1			1
Hernia inguinal.....		6	1	7	1	4				2
“ umbilical.....			2	2						2
Hip disease.....		1		1						1
Abscess		8	1	9	8					1
Caries spine.....		3	1	4		2	1			1
Inguinal adenitis.....		1	1	2	1	1				
Dactylitis tubercular.....		1		1		1				
Appendicitis		1	1	2						2
Tubercular sinuses.....		1	1	2			1			1
Varicose veins.....			2	2		1				1
Necrosis jaw.....			1	1						1
Periostitis.....			2	2	1					1
GENITO URINARY.										
Gonorrhœa		11	2	13	8	2				3

DISEASES.	In Hospital, Jan. 31, 1897.	ADMITTED.			DISCHARGED.			DIED.		In Hospital, Feb. 1, 1898.
		Males.	Females.	Total.	Well.	Relieved.	Unrelieved.	Males.	Females.	
Chancroids.....		1	...	1	1	...	...	...	...	
Orchitis.....		1	...	1	...	...	...	...	...	1
Stricture		4	...	4	2	...	...	...	...	2
Syphilis	20	14	17	51	8	23	1	1	2	16
" congenital.....		...	2	2	...	...	...	...	2	...
Hypertrophied prostate.....		4	...	4	...	3	...	...	...	1*
Phymosis.....		3	...	3	1	1	...	...	...	1
Venereal warts		1	...	1	...	...	...	...	...	1
Hydrocele.....		2	...	2	1	1	...	...	...	
Gonorrhoeal rheumatism....		1	...	1	1	...	...	...	...	
Paraphymosis		2	...	2	2	...	...	...	...	
Bubo		5	...	5	3	1	...	...	...	1
Stone in bladder.....		...	1	1	...	...	1	...	...	
INJURIES.										
Burns		1	1	2	2	...	...	...	...	
Contusions		2	8	10	6	2	...	...	...	2
Frost-bite		1	...	1	1	...	...	...	...	
WOUNDS.										
Incised wounds.....		2	3	5	5	...	...	...	...	
SPRAINS.										
Ankle	1	...	...	1	1	...	...	...	...	
Hip	2	...	...	2	2	...	...	...	...	
Back		1	...	1	...	1	...	...	...	
DISLOCATIONS.										
Shoulder		...	1	1	1	...	...	...	...	
Femur, old.....	1	...	...	1	1	...	...	...	...	

DISEASES.	In Hospital, Jan. 31, 1897.	ADMITTED.			DISCHARGED.			DIED.		In Hospital, Feb. 1, 1898.
		Males.	Females.	Total.	Well.	Relieved.	Unrelieved.	Males.	Females.	
FRACTURES.										
Fractured fibula, old.....	1	....	3	4	....	3	1	....	....	....
“ femur.....	2	1	6	9	2	2	..	....	....	5
“ radius .....	....	1	3	4	2	....	....	....	....	2
Multiple fracture.....	1	....	....	1	1	....	....	....	....	....
Fractured patella.....	....	1	....	1	....	1	..	....	....	....
“ rib.....	....	....	1	1	1	....	....	....	....	....
Totals.....	237	415	504	1156	329	354	75	62	83	253

MATERNITY RECORD.

	Males.	Females.	Total.
Number of children born.....	10	7	17
Still-born, including premature.....			1
Illegitimate			10
NATIVITY OF MOTHERS.			
United States			12
Ireland			5

OUT-PATIENTS DEPARTMENT.

Showing Number of Persons Treated as Out-Patients During the Year.

DISEASES.	Males.	Females.	Total.
GENERAL DISEASES.			
Coryza.....	21	10	31
Influenza	12	.....	12
Malaria	11	.....	11
Lumbago	17	3	20
Rheumatism articular	21	18	39
Myalgia.....	4	1	5
Phthisis	20	9	29
Anaemia	6	.....	6
Alcoholism	14	2	16
Typhoid fever.....	.....	1	1
NERVOUS SYSTEM.			
Hemiplegia	3	1	4
Hysteria .....	.....	1	1
Epilepsy	7	2	9
Neuralgia	10	4	14
Neurasthenia.....	1	1	2
Insomnia	5	.....	5
Hemicrania	2	.....	2
Sciatica	1	.....	1
Tabes dorsalis.....	3	.....	3
Cephalalgia	7	5	12
Dementia	3	3	6
Neuritis	2	.....	2

DISEASES.	Males.	Females.	Total.
Wrist drop.....	1	.....	1
CIRCULATORY SYSTEM.			
Heart disease, functional.....	.....	2	2
“ mitral regurgitation.....	10	5	15
“ aortic stenosis.....	.....	1	1
“ “ regurgitation.....	1	3	4
DISEASES OF FAUCES.			
Tonsillitis.....	3	2	5
Hypertropic rhinitis.....	2	.....	2
Laryngitis.....	2	.....	2
Bronchitis, acute.....	10	.....	10
“ chronic.....	57	29	86
Asthma.....	7	.....	7
PLEURA.			
Pleurisy.....	7	.....	7
Pleurodynia.....	.....	3	3
DIGESTIVE SYSTEM.			
Stomatitis.....	3	1	4
Gastralgia.....	.....	1	1
Dilated stomach.....	3	.....	3
Indigestion.....	41	28	69
Colic.....	2	3	5
Diarrhœa.....	31	8	39
Constipation.....	23	28	51
Oxyuris vermicularis.....	1	.....	1
Ascaris lumbricoides.....	1	.....	1
LIVER.			
Icterus.....	.....	1	1
URINARY SYSTEM.			
Cystitis.....	11	2	13

DISEASES.	Males.	Females.	Total.
Urinary retention.....	3	.....	3
Prostatitis	1	.....	1
Hypertropied prostate.....	13	.....	13
Diabetes.....	1	1	2
Dysuria.....	2	3	5
Incontinence.....	7	2	9
Nephritis	3	1	4
CUTANEOUS SYSTEM.			
Psoriasis.....	2	.....	2
Eczema	9	.....	9
Pediculis capitis.....	3	.....	3
Erythema.....	1	.....	1
Acne.....	1	.....	1
Herpes zoster.....	.....	1	1
UNCLASSIFIED.			
Debility	44	27	71
SURGICAL.			
Periostitis .....	.....	1	1
Hemorrhoids.....	7	.....	7
Fistula ano	3	.....	3
Synovitis	1	.....	1
Ulcer	8	3	11
“ varicose	26	2	28
Cancer	2	.....	2
Odontalgia.....	3	.....	3
Frost bite.....	1	.....	1
Clavus.....	.....	1	1
Potts' disease	1	.....	1
Hernia femoral .....	.....	1	1
“ inguinal	7	.....	7

DISEASES.	Males.	Females.	Total.
Adenitis	1	.....	1
Stricture, urethra	11	.....	11
Hydrocele	2	.....	2
Dislocation, shoulder.....	.....	1	1
" finger.....	.....	1	1
Flat foot	1	3	4
Burns	1	1	2
Contusions.....	7	3	10
Wounds, septic.....	3	.....	3
" punctured	3	.....	3
Sprains, thumb.....	1	.....	1
" ankle.....	3	.....	3
" shoulder.....	2	1	3
" knee	2	.....	2
" wrist	5	.....	5
Tubercular wrist.....	1	.....	1
Fracture, radius.....	3	1	4
" metacarpal.....	1	.....	1
" patella	1	.....	1
" leg.....	1	.....	1
" clavicle	1	.....	1
Abscess.....	1	.....	1
Varicose veins	2	6	8
Suppurating sinuses.....	1	.....	1
Nocturnal emissions.....	2	.....	2
EAR.			
Otitis media	3	.....	3
Vertigo .....	.....	1	1
Tinnitus aurium	2	.....	2
Cerumen.....	1	.....	1

DISEASES.	Males.	Females.	Total.
EYE.			
Conjunctivitis	7	.....	7
Keratitis .....	.....	1	1
Ulcer of cornea	2	1	3
Entropion	2	.....	2
Myopia	2	.....	2
VENEREAL.			
Gonorrhœa	7	1	8
Syphilis	11	4	15
DISEASES OF WOMEN.			
Mastitis .....	.....	2	2
Vulvitis .....	.....	2	2
Menorrhagia .....	.....	1	1
Menopause .....	.....	2	2
Prolapsus uteri .....	.....	2	2
	628	255	883

REPORT OF THE VISITING STAFF OF LONG ISLAND.

To the Board of Trustees of Pauper Institutions :

During the past year the condition of the hospital, from a medical point of view, has been satisfactory. There has been a constant improvement in the care of patients, due largely to the services of the staff of resident physicians. The general appearance and discipline of the wards has also greatly improved; they have changed, during recent years, from those of a poorhouse infirmary to wards which would do credit to a well-equipped and organized hospital. This change must be attributed, in great measure, to the present nursing system. The visiting staff recognizes and is appreciative of the willingness of the management to co-operate with them in all matters pertaining to the treatment of patients.

While recognizing what has been done, we would respectfully call the attention of the Board of Trustees to certain present needs.

The male wards of the hospital have been constantly overcrowded, necessitating keeping many patients, who should be in the hospital, in the institution building, to their detriment. We therefore recommend a new male ward. With increased space it would be possible to separate from the main wards tuberculous and other patients suffering from diseases which render such isolation desirable. It is furthermore urged that there should be an increase in the number of small rooms, suitable for one or, at most, two patients, both for men and women.

Proper facilities should also be provided for the care of patients with contagious diseases, which not infrequently occur.

Those patients whose condition does not require them to be in the hospital are treated as out-patients in an inadequate room in the basement of the hospital building. We would recommend a larger room, with improved facilities for this work.

The morgue is not suitable for the proper care of the dead, and we earnestly recommend a new one.

There is need of further improvement in the plumbing, to which we call the attention of the Board.

The hospital kitchen is entirely inadequate, and should be much enlarged.

We would finally suggest the advisability of improving the ventilation in certain parts of the institution buildings.

Respectfully submitted,

JAMES J. MINOT,

E. W. TAYLOR, *Secretary*,

For the Visiting Staff.

RULES FOR ADMISSION TO THE HOSPITAL AT LONG ISLAND.

Persons eligible to care in the hospital at Long Island, Boston Harbor:

1. Any person who has a legal settlement in the city of Boston, and who stands in need of relief, and who is ill.

2. Any person who, if well, could be supported at his home, but who, being ill, needs special medical or surgical care.

3. Persons standing in need of relief, having no settlement in Boston, but who are too ill to be removed to the city or town of their settlement, or to a State institution if they are without a settlement.

The question of settlement will be determined by the Institutions Registration Department, 28 Court square; office hours, 9 to 5 o'clock; on Saturdays, 9 to 2 o'clock. Any person able to walk should apply at that office. An ambulance and carriage are at the disposal of that office, and would be sent for persons unable to walk, to carry them to boat or train.

It is very desirable that application should be made the day before it is desired that the person should go to the hospital, or, if an emergency case, before 12 o'clock, to admit of the settlement being looked up and the ambulance or carriage sent, if necessary. If a person applies at this office too late for admission on the same day, he would be sent from this office to the Wayfarers' Lodge (men), or to the City Temporary Home (women).

Cases of contagious illness, such as scarlet fever, diphtheria, etc., are not received at Long Island, but should be referred to the City Hospital.

In the case of a person who does not speak English, it is desirable that he should be accompanied by a friend who could interpret when he makes his application at 28 Court square.

It is earnestly requested that if a person is advised to apply for admission to the hospital at Long Island, he should be made to clearly understand that it is the Hospital

Department of the Boston Almshouse, as much distress has often been occasioned by ignorance of this fact at the time of going to the hospital.

The hospital at Long Island is under the care of a medical superintendent with three assistants. There is a training-school for nurses, with a superintendent of nurses, six head nurses, and twenty-five probationers or pupil nurses.

REPORT OF THE SUPERINTENDENT OF THE CHARLESTOWN ALMSHOUSE.

CHARLESTOWN DISTRICT, February 1, 1898.

To the Board of Trustees of Pauper Institutions :

I respectfully submit the annual report for this institution for the year ending January 31, 1898.

Religious services have been held each Sunday, open to all who desire to attend; those of the Roman Catholic faith are allowed to attend the St. Francis de Sales Church on Bunker Hill street, Mass being said at the almshouse at intervals for those who through infirmities are unable to attend.

Several entertainments have been given during the year by friends of the institution; one by Dr. W. H. Prescott, of the Penal Institutions Department, illustrated by stereopticon views upon Australia and New Zealand, which was highly entertaining and instructive; another by Mr. Edward Taylor of Everett, of a musical and literary order, followed by a collation of cake, confectionery, fruit, etc., which was very well attended and highly appreciated.

Commissioner Marshall, of the Penal Institutions Department, sent a fine collection of Christmas cards for the old ladies, which were very much enjoyed by them.

The Hospital Newspaper Society, Mrs. Louisa J. Dodge, 195 Bunker Hill street, and others, have contributed books, magazines and papers, for which I wish to take this opportunity to thank them in behalf of the inmates of this institution.

The garden was fairly productive, although it was not a good year for crops; carrots and onions were a total failure.

All the recommendations which were made in my last annual report have been carried out, or are in progress. I would respectfully recommend that the method heretofore followed, of purchasing material, and making the repairs by the labor of the inmates, be continued.

Some improvements have been made in the diet. Our bread is now baked on the premises, at less cost, and from the best flour, with better results.

In conclusion, permit me to thank your Honorable Board, collectively and separately, for the valuable suggestions and the deep interest you have manifested in the welfare of those under my charge.

Respectfully submitted,

CHANDLER EASTMAN,
Superintendent.

REPORT OF THE VISITING PHYSICIAN OF
THE CHARLESTOWN ALMSHOUSE.

BOSTON, February 1, 1898.

TO CHANDLER EASTMAN, ESQ., *Superintendent Charlestown
Almshouse.*

SIR: As visiting physician to the institution under your charge, I herewith submit my annual report for the year ending February 1, 1898.

I am pleased to say that the general health of the inmates during the last twelve months has been good, the chronic complaints as usual, such as bronchitis, valvular heart disease, rheumatism, cystitis, ulcers, eczema, etc., principally calling for treatment, and that there has been during that period a marked decrease in the death rate as compared with previous years.

There have been in all 11 deaths (8 of males and 3 of females) from the following causes: Paralysis, 4; valvular heart disease, 3; apoplexy, 1; phthisis, 1; chronic bronchitis, 1; senility, 1; average age of decedents, 69.

The patients, who during the last few months have needed constant professional care, have, upon the recommendation of the Board of Trustees, been removed to the hospital at Long Island, where the larger number of attendants and greater facilities for nursing the sick afford a degree of attention impossible with the limited means at our command.

A much-needed improvement has been brought about, thanks to the Trustees, by partitioning off a part of the bathroom on the second floor to serve as a dispensary, giving a commodious room much better fitted to the needs of the institution than the former inadequate space appropriated for this purpose.

My sincere thanks are due to you for your courteous kindness in all our official relations, and to Mrs. Eastman, the matrons and nurses, for their constant and unremitting care of the patients under my charge.

Very respectfully yours,

RUFUS W. SPRAGUE, M.D.,

Visiting Physician.

STATISTICS OF THE CHARLESTOWN ALMSHOUSE.

Number remaining January 31, 1897:

Males	.	.	.	.	.	.	.	.	52
Females	.	.	.	.	.	.	.	.	93
Total	.	.	.	.	.	.	.	.	<u>145</u>

Admitted from February 1, 1897, to January 31, 1898:

Males	.	.	.	.	.	.	.	.	73
Females	.	.	.	.	.	.	.	.	37
Total	.	.	.	.	.	.	.	.	<u>110</u>

Discharged from February 1, 1897, to January 31, 1898:

Males	.	.	.	.	.	.	.	.	70
Females	.	.	.	.	.	.	.	.	45
Total	.	.	.	.	.	.	.	.	<u>115</u>

Remaining January 31, 1898:

Males	.	.	.	.	.	.	.	.	55
Females	.	.	.	.	.	.	.	.	85
Total	.	.	.	.	.	.	.	.	<u>140</u>

Largest number during the year	.	.	.	.	.	.	.	.	150
Smallest " " "	.	.	.	.	.	.	.	.	128
Average " " "	.	.	.	.	.	.	.	.	138 +

Number of deaths during the year:

Males	.	.	.	.	.	.	.	.	8
Females	.	.	.	.	.	.	.	.	3
Total	.	.	.	.	.	.	.	.	<u>11</u>
Average age of decedents.	.	.	.	.	.	.	.	.	68 +

The number maintained at the institution shows a decrease of ten, upon an average for the year.

APPENDIX.

*Chapter 395 of the Acts of 1897, as Amended by Chapter 451
of the Acts of 1897.*

AN ACT TO ESTABLISH SEPARATE DEPARTMENTS OF THE CITY OF
BOSTON FOR THE CARE OF CHILDREN, PAUPERS, INSANE PER-
SONS AND CRIMINALS.

Be it enacted, etc., as follows:

SECTION 1. The children's institutions department, the pauper institutions department, the insane hospital department and the institutions registration department, of the city of Boston, are hereby created as departments of said city, and shall be under the charge of the officers herein designated therefor. Said officers shall be citizens or taxpayers of said city, and shall be appointed by the mayor of said city without confirmation by the board of aldermen. The provisions of chapter two hundred and sixty-six of the acts of the year eighteen hundred and eighty-five, and of all other acts relating to the departments of the city of Boston, or the officers or employees thereof, except as otherwise herein provided, shall be applicable to said departments and the officers and employees thereof.

SECT. 2. Each of said departments, except the institutions registration department, shall be under the charge of a board of seven trustees, at least two of whom shall always be women; during the current year one of said trustees for each of said departments shall be appointed for the term of five years, two for the term of four years, one for the term of three years, two for the term of two years and one for the term of one year, beginning with the first day of May in the year eighteen hundred and ninety-seven; and hereafter in the year in which any term or terms shall expire a trustee or trustees shall be appointed for the term of five years, beginning with the first day of May in the year of appointment; any vacancy occurring among said trustees shall be filled by appointment of a trustee as aforesaid for the remainder of the term. Said trustees shall serve without compensation, but all expenses reasonably incurred by them in the performance of their duty shall be paid by said city if approved by a recorded vote of the board of which the trustee incurring such expense is a member. They shall organize on the first

Monday of May in each year, or as soon thereafter as may be, by the choice of a chairman who shall be one of their number, and of a secretary who may or may not, at their discretion, be one of their number. No such trustee, nor any person in the employ of any of said trustees or departments shall be interested in a private capacity, directly or indirectly, in any contract or agreement for labor or for articles furnished for any of said departments.

SECT. 3. The board of trustees for the children's institutions department shall be known as the trustees for children, and shall have, exercise and perform all the powers and duties relating to children, or to any institution or place in which they are confined or detained or cared for, including the house of reformation, now conferred by the statutes of this Commonwealth upon the institutions commissioner of the city of Boston, except as to children lawfully committed to or detained in institutions established for the care and custody of the adult insane paupers and criminals.

SECT. 4. The board of trustees for the pauper institutions department shall be known as the pauper institutions trustees, and, except as otherwise provided by section three of this act, shall have, exercise and perform all the powers and duties relating to poor and indigent persons, or to any institution or place in which they are confined or detained or cared for, now conferred by the statutes of this Commonwealth upon the institutions commissioner of the city of Boston.

SECT. 5. The board of trustees for the insane hospital department shall be known as the insane hospital trustees, and shall have the general care and control of the Boston lunatic hospital established by the city of Boston under the provisions of chapter one hundred and thirty-one of the acts of the year eighteen hundred and thirty-nine, and all other hospitals that said city has established, or may hereafter establish, for the care or treatment of the insane, and the same shall hereafter be known as the Boston insane hospital; and said trustees shall have all the powers relating to the insane and to the institutions in which they are confined, conferred by the statutes of the Commonwealth upon the institutions commissioner of the city of Boston.

SECT. 6. The institutions department of the city of Boston shall hereafter be styled the penal institutions department, and the institutions commissioner shall hereafter be styled the penal institutions commissioner, and he shall continue to have, exercise and perform all the powers and duties now conferred by the statutes of this Commonwealth upon the institutions commissioner of the city of Boston not conferred by this act upon any other officer or board of trustees. The penal institutions commissioner may, with the approval of said mayor, appoint one assistant.

SECT. 7. The institutions registrations department shall be under the charge of the institutions registrar, who shall investigate all questions relating to the settlement of paupers, to the

commitment of the insane, or to the agency for discharged prisoners, or to any rights, duties or liabilities connected therewith, and report thereon to the department interested therein; and shall perform such services relating to the accounts and to the collection, registration and tabulation of statistics relating to said departments, or any of them, as may be required of him by said mayor or by the officer or trustees in charge of any of said departments, with the approval of said mayor. Said registrar shall receive an annual salary of three thousand dollars, or such other salary as may be fixed by ordinance.

SECT. 8. Said mayor shall quarterly, in the months of June, September, December and March, and at such other times and at such places as he shall appoint, hold conferences, at which may be present said penal institutions commissioner, said institutions registrar, two members of each of the aforesaid boards of trustees, to be selected by such boards severally, and two members of the board of overseers of the poor, to be selected by such board, to consider any subjects relating to the work of said departments, or of any two or more of them, or to the co-ordination of such work, and at said conferences said mayor shall preside.

SECT. 9. The city of Boston may take and hold any real or personal property which may be given, granted, bequeathed or devised to and accepted by it for the benefit of any one or more of said departments or of the persons under the care thereof. Such property or the income thereof shall be used, applied and disposed of according to the lawful directions of the donor thereof, by the officers in charge of such department or departments.

SECT. 10. Any officers or employees of the institutions department of the city of Boston, whose tenure of office or position may be affected by this act or the carrying out thereof, may be appointed to similar positions in said city at any time within six months of the passage of this act, without civil service examination or enrolment.

SECT. 11. No veteran holding an office in the institutions department of the city of Boston shall be removed or suspended, or shall, without his consent, be transferred from such office or employment, except after a full hearing before the mayor, and at such hearing the veteran shall have the right to be present and to be represented by counsel. Such removal, suspension or transfer shall be made only upon the written order of the mayor. — [*Approved May 13, 1897.*]



ANNUAL REPORT
OF THE
PENAL INSTITUTIONS COMMISSIONER.

32 TREMONT STREET, BOSTON, MASS.
February 1, 1898.

HON. JOSIAH QUINCY,

Mayor of Boston :

SIR : In accordance with chapter 3, section 22, of the Revised Ordinances, the Penal Institutions Commissioner respectfully presents the report of the Penal Institutions Department for the year ending January 31, 1898.

The institutions of this department are the Houses of Correction at Deer Island and South Boston.

HOUSE OF CORRECTION, DEER ISLAND.

This institution is in a very satisfactory condition, and, as compared with similar institutions which the Commissioner has visited, is a model of neatness and order. That long existing and much condemned institution, known as Loafers' Hall, has been abolished, and the beneficial effect of its elimination is well marked upon the whole prison.

The daily visits of friends to prisoners have been stopped, and a visiting day appointed, Friday of each week, and these visits are no longer allowed to take place at the institution, but the inmates see their friends at the Receiving Office on the wharf. This change is working very satisfactorily to all, as the inmates and friends have a longer time with one

another, and there is not that interference with duty that existed under the old plan.

The electric lighting service has been extended to include the library, assembly room, and office in the administration building. It is my desire to increase the equipment of the dynamo building by the addition of a boiler and dynamo in order to further extend the service. The women's building, now lighted by oil lights, should be embraced in the extension at an early day.

Library.

There has been collected and systematically arranged, and catalogued here, a large and serviceable library, one that cannot fail to be productive of great benefit to the inmates. All who desire are furnished with a card, and books are exchanged for the inmates weekly.

The establishment of this library is a matter in which I have been very much interested, for, with the restrictions imposed upon us in our employment of the inmates, I feel the need of some occupation for the minds of the men to prevent the brooding and self-concentration of thought that might produce harmful results. I feel especial pride that the collection of this library has been accomplished with but little expense to the city. Most of the books have been contributed by the citizens, and, although in some cases they required new bindings, they have been gladly and gratefully received, and I desire to extend my thanks to those who so kindly responded to my request for books for this purpose.

In connection with the library, I have established a reading and assembly room for the officers and matrons, where they may spend their leisure hours in consultation of the library or in social converse. The room is much appreciated by the officials of the institution.

Hospital.

The hospital is in excellent condition, and is a model for others of its kind. It is excellently conducted, and of its class, that of prison hospitals, I do not think there is its superior anywhere.

The new Ward D, opened during the year, affords ample accommodation for isolation of noisy or demented patients, and for this purpose has been found to be of much service in the relief of the other wards.

Much to my regret, Ward A took fire on Saturday, December 11, 1897, and was almost entirely destroyed. That

the entire hospital was not consumed reflects great credit upon the discipline of the institution and the management of the fire. About three hundred of the inmates assisted the officers in extinguishing the conflagration and there was not, during its continuance, the slightest appearance of disorder or attempt to escape.

Investigation after the fire resulted in the condemnation of the system of ventilation by wooden ducts under the floors of the wards, and it is my purpose to replace them with those of metallic construction as soon as possible.

Reservoir.

Since the fire I have re-opened negotiations with the Metropolitan Sewerage Commission looking towards the building of a reservoir on the high land of the island. These negotiations were begun some years ago, but for some reason were abandoned. I hope to be able to arrange with the Board for a joint construction of such a reservoir on terms favorable to them, and at but slight expense to the city. Should my propositions be accepted by them, work will be begun as soon as the ground is in condition to work, and when this basin is completed the institution will be better protected against fire and danger from water famine.

A plan submitted by the City Engineer for a salt-water service in case of fire, is under consideration, and if found financially possible, will probably be adopted.

Sewerage.

Since the building of the new prison and dynamo building, the drainage facilities were found to be extremely deficient, and to remedy this condition it was necessary to establish a connection with the main sewer of the Metropolitan Sewerage Department. This connection has been made, and since its completion the sewerage has been found to be satisfactory, and the troubles which existed have been entirely removed. In this work I have been assisted in a very material way by the Superintendent of Streets, Mr. Wells, and his assistants, and by the Metropolitan Sewerage Commission and their engineers, and to them I desire to extend the thanks of this department.

Discipline.

The discipline of the institution is in excellent condition. The number of inmates punished during the year for breaches of discipline, was 606, against 969 in 1895, and 634 in 1896,

and the punishments have been lessened, the number of days spent in solitary during the past year being 1,786, against 2,907 in 1895, and 1,851 in 1896. This reduction of punishments, with an increased population, is very gratifying. It is also a fact worth remarking that in this institution, as well as in the House of Correction, South Boston, not a single machine has been broken purposely by an inmate during the past year.

Wharves.

I desire to earnestly request that an appropriation may be made for the repair of wharves at this institution. They are in urgent need of such repair, and provision should be made at once for this purpose.

An addition to the bakery and a coal shed for the dynamo building have been erected during the past year.

HOUSE OF CORRECTION, SOUTH BOSTON.

This institution, erected some sixty years ago, is ill-adapted to the purposes for which it is used and provision should be made at once for the building of the Suffolk County Reformatory, proposed by chapter 536, Acts of 1896. The buildings are unsanitary, opportunities for classification are non-existent, and they are not in accordance with the modern ideas of the treatment of criminals.

I earnestly desire that early steps may be taken to discontinue this institution, and to erect a modern prison that will be a credit to the city.

The changes in this institution have been confined to improvements in the care of the mental and bodily welfare of the convicts, it being thought unwise to make any material changes, involving expense, in their accommodations owing to the probability of the discontinuance of the use of the buildings for a prison.

I have established at this institution a school for illiterates that is doing most excellent work (see report of school-master appended) and the physical training, which was introduced last summer with the kind co-operation of Colonel Woodruff, commander of the garrison at Fort Warren, is achieving excellent results not only in keeping the men in good condition while in the institution, but also in sending them out into the world better fitted mentally and physically to resume an honest life.

The results of the adoption of physical exercise can be observed, not only in the better appearance of the men, but in

the lessened reports of sickness and number of complaints to the Commissioner of ill-health and ill-treatment. I have received from all sides approval of the introduction of the exercise, and I am satisfied that its continued use in the institution will be productive of much good. The physician at the institution bears testimony in his report appended to its value in the prison.

Discipline.

The discipline of the institution is excellently maintained, and that this is so in this imperfect and antiquated institution is an excellent testimonial to the master and officials in charge. The improvement in discipline may be shown by the number of punishments of this year as compared with those of the years immediately preceding; in 1895 the number punished was 610; in 1896, 426; in 1897, 354; the number of days spent in solitary was in 1895, 1,715; in 1896, 1,042; in 1897, 846.

RULES.

The new rules (appendix), adopted by the Commissioner in September last, are assisting the discipline in the institutions very materially. A frequent complaint by the inmates was that they were unaware that they had broken any rule until they were to be punished. While this statement may not always have been true, yet it could not be denied that they were not informed as to the rules as they should have been, and the provisions of the new rules as to their promulgation and distribution leave no ground for such complaint. Every convict is provided with a copy of the rules, and they are read aloud to the inmates on the first Sunday in every month at chapel services. Thus no one can now claim ignorance of their requirements.

LABOR IN PRISON.

The changes in the laws relating to prison labor, passed by the Legislature, chapters 412 and 480 of the Acts of 1897, will alter materially the system under which such work has been conducted. All work in prisons must now be performed on what is termed the public-account plan; that is, that materials must be purchased from which to manufacture the goods, and the finished product must be placed upon the market by the institution in which they are manufactured. Arrangements are now in progress to accomplish the changes

made necessary by the laws, and I hope before long that the full number of inmates allowed will be actively employed. I wish it might be made more of such a kind as would be serviceable to the men when they leave the institutions in making them useful to themselves and to the community. In assisting in the reformation of this class, effort should be directed towards making them more helpful to themselves and the world. Many of them have fallen into the ways of crime by reason of defective or inefficient training in early life. It should be the aim in administering penal institutions to do as much to reform the inmates as to protect society, and it seems to me that to bring about a reformation thoughtful effort must be made to compensate for defects in early training, if they exist, and to discharge the man better equipped to enter life and to do for himself in the world. This our present system does not accomplish. It assists to render him less able to care for himself and his family. It weakens him physically and mentally, and makes more easy his relapse again from the ways of good citizenship and order. The state thus assists in the increase of crime and the degeneration of the criminal. I believe that society can do as much toward protecting itself from the criminal by thoughtful work within the prison as by effort without, that our detection of the criminal and his exclusion from the public is but a step towards that protection, that, having segregated those of unhealthy mind from the public, we should begin our work to restore moral health to them.

This can be done in no better way than by educating them in every way to become self-supporting when they are released from confinement. The first step in this direction should be the schooling of the illiterates in essentials of education, reading, writing and arithmetic. Of the 10,954 committed to Deer Island during the past year, 1,539 persons, or about fourteen per cent., could not read or write. Of the 782 commitments to the House of Correction, South Boston, 68 could not read or write, or nine per cent., making an average percentage of illiterates committed to the institutions of this department of about thirteen per cent.

To abolish this illiteracy I think to be the first step in prison reform, and, when one considers the vast difference between the capacity of one who possesses ability to read and write, and perform simple arithmetical problems, and one who does not, it is readily understood that the service performed by such education is of the greatest benefit to the man and to the community to which he returns.

Next beyond the total illiterates comes the class who

possess no knowledge of useful occupations by which to earn a living, and to this class effort should be directed to furnish them with instruction in some useful trades in order to render them more capable of self-support when they leave the prison.

By reference to the tables of Industrial Relation of Convicts, No. 15, it will be seen that many of the inmates have no occupation except that of an unskilled laborer; about sixty per cent. are of this class. It is my desire to take from this class the ones that are likely to be benefited and give them instruction in some of the mechanical trades, to teach them handicraft of some sort. I am fully aware of the discouraging nature of the material in which this work is to be attempted, of the disappointments that are likely to occur in it, but I am convinced that in this direction good work may be done. Complete success, unanimous reformation, is not to be looked for; but I have seen enough of success among those considered incorrigible to encourage me to believe that with well-matured and earnest effort much may be accomplished.

The adoption of such a policy as this would relieve the men in the prisons of work that is unsuited to them (working on sewing-machines), and give it to the class to which it belongs, — the female population, — of whom there are more than sufficient in our institutions to do the work allowed us by the laws referred to.

DRUNKENNESS.

Of the 10,954 persons committed to the Deer Island institution, 8,437 or seventy-seven per cent. were sentenced for drunkenness, — only 2,517 being committed for all other offences. It is much to be regretted that the county is obliged to maintain an institution so largely for misdemeanants of this character. I am led to believe, by my experience with this institution, that many of the persons sent here for drunkenness desire to be so sent, that they wish to relieve themselves of their own support, and accept with pleasure their sentence to the institution, feeling sure during its duration of good food and clothing, and comfortable accommodation. I do not believe that confinement at Deer Island is looked upon by this class as a punishment, but more as a diversion, a vacation, a rest from toil. What should be done with this class is a difficult problem; increase their sentences at repetition of their offence, and they are pleased.

I have met few if any instances of mental suffering on the part of the inmates here caused by their confinement. They

are, in the majority of cases, better taken care of by the State than they would be by their own efforts when at liberty. Thus what is intended as a punishment is converted into reward, and the man committed rejoices in his freedom from care and the responsibility of maintaining himself instead of feeling that his freedom to go where he pleases is taken away; in other words, he gladly exchanges his liberty to be free from the care of maintaining himself. This system works injustice in another way. In many instances the culprit has a family dependent upon him, and in such a case the punishment for his offence falls with crushing force upon the wife and children. Deprived of the one who should support them, they are forced to struggle to maintain themselves, and in many cases, unable to do this, they apply to the Overseers of the Poor for relief. Thus our treatment of drunkenness encourages laziness and promotes pauperism, causes the innocent to suffer, and pampers and protects those who are offenders against public order.

I have made investigation into the treatment of drunkenness by other states and countries, in the hope that in some community there might be found a wiser way of treating this class of criminals than by fine and imprisonment; but I regret to say that, with slight modifications, those penalties seem to be the ones universally applied throughout the world. In Arkansas, a drunken person may be delivered to a discreet person, who will care for him, or he may be confined until morning, or until sober, and then allowed to go at large. An habitual drunkard may be placed under guardianship. In Indiana, a person offending for a third time may be imprisoned from five to thirty days and disfranchised for any determinate period. In Michigan, a drunkard may be placed on probation, with sureties for good behavior, for from sixty-five days to one year. In Texas, a city or town may hire out drunkards or put them at labor on the streets either as a penalty for the offence or for non-payment of fine. In the State of Washington, an habitual drunkard is defined to be "one addicted to the use of intoxicants and who has been twice convicted of drunkenness or of being drunk and disorderly," and the law prescribes that they shall be declared as such in open court, and that a list of those so declared shall be furnished retailers, who shall keep it posted in their places of business, and that no liquor shall be sold to persons whose names are on such lists. Persons declared to be habitual drunkards may have their names removed from such lists after two years of sober life. In West Virginia, the fine for drunkenness is one dollar, but the penalty for being

drunk near polling-places during elections is a fine of from ten to fifty dollars.

In the Province of Quebec, a judge may appoint a guardian for a drunkard, who may be excused from service after one year of sober life of the ward. The guardian may commit to, or release from, any home for drunkards, his ward at pleasure.

In Switzerland, in 1890, in the Canton of St. Gall, it was provided that habitual drunkards may be detained in an inebriate asylum for a period not exceeding eighteen months, and, if his property is sufficient, he shall pay for his support; but if not, he shall be supported as a public charge, and application may be made for the support of his family during his detention.

In Holland, the ducking-stool was used for the punishment of female offenders, and was reported to be very effectual.

With these modifications the penalties imposed upon drunkards are the same as ours, — fine and imprisonment. I believe that these penalties are sufficient to deter many from offending, but they do not prove deterrent always, and it would appear as though our treatment of those who repeatedly offend against the law should be amended in order that they may be more effectually restrained.

The treatment of these offenders might be regulated by the number of admissions. If the serving of one sentence has not been sufficient to deter one from being again committed, let him feel the rigor of imprisonment more on a second commitment, and still more on each succeeding one until the hardship of imprisonment is sufficient to overcome the willingness to undergo confinement. It is my purpose to study this suggestion and ascertain if classification upon this basis cannot be arranged.

AID FOR DISCHARGED PRISONERS.

One of the most important duties of the department is in the aid of those released from the institutions. The work in this line has been pursued on rather more definite lines this year than before, and it is expected that this change of plan will be productive of good results in better discrimination between the worthy and unworthy.

The investigation of cases begins when the prisoner is serving his sentence, and when released it usually occurs that our agents are ready to aid him to enter upon society not entirely unable to assist himself.

The condition of the man released from confinement without friends or money is indeed pitiable. Those who knew

him before confinement know him to be a man who has been a law-breaker, and he has nothing with which to commend himself to others from whom employment might be had. If he is without money and has no friends, who, knowing his history, will assist him? He is simply a pariah in society, and, unable to maintain a place, he must fall either by begging or thieving. To assist him over the transition period, between his release and time of getting employment, is therefore a means of preventing his return to one of our institutions, and, as the amount of money expended, if judicially controlled, is not a large one, it seems to me wise to foster this work, as the expense is saved to the city many times over in saving the cost of the maintenance of many of those assisted in some of our institutions.

Since the institution of the system there have been assisted, in various ways, 2,793 persons at a cost of \$480.66.

RELEASES OF PRISONERS.

The number of prisoners released on probation by permit of the Commissioner during the year has been 2,700, classified in the following tables:

FINE CASES.

(Arranged by Courts.)

COURT.	RELEASES GRANTED.		
	Male.	Female.	Total.
Central	1,075	29	1,104
South Boston	256	13	269
Charlestown	136	7	143
East Boston.....	110	8	118
Roxbury.....	420	47	467
Dorchester.....	143	2	145
Brighton	10	1	11
West Roxbury.....	36	1	37
Chelsea.....	56	3	59
Total.....	2,242	111	2,353

SENTENCED INMATES.

(Arranged by Courts.)

COURT.	Applications referred.	Releases recommended.	Releases not recommended.
Central	364	172	192
South Boston	92	73	19
Charlestown	21	16	5
East Boston.....	23	23	
Roxbury	50	36	14
Dorchester.....	17	6	11
Brighton.....	2	2	
West Roxbury.....	5	5	
Chelsea	9	9	
Superior	25	5	20
Total	608	347	261

SENTENCED INMATES.

(Arranged by Institutions.)

	Application for Pardon.	RELEASES GRANTED.			Releases Refused.
		Men.	Women.	Total.	
Suffolk County Jail	5	4	1	5	
House of Correction, South Boston.....	35	13	4	17	18
House of Correction, Deer Island	568	290	35	325	243
Total.....	608	307	40	347	261

BOATS.

The boats connecting with the islands in the harbor, the "J. Putnam Bradlee" and the "John Howard," are in good condition generally. The boiler of the "Howard," has been in use for about twelve years, and requires careful treatment and will, in the near future, require to be replaced by a new one.

The service of the boats has been very satisfactory. The "Bradlee" performed most excellent service in connection with the Randidge Fund excursions and also in transporting sick children from the Carney and Children's Hospitals and the Boston Dispensary about the harbor, on the afternoon trips, to give them the benefit of a salt-water excursion. Although thousands of children were transported, and an amount of benefit derived by them not easy to be estimated, this use of the boat did not in the least interfere with her regular duties, and there was no inconvenience, disorder or mishap connected with such use.

I cannot conclude my report without expression of my earnest appreciation of the aid rendered me by those connected with the administrative work of this department. Their prompt and ready assistance in the carrying out of the details of the changes has made the work a pleasure and has lightened its burdens very materially.

From Assistant Commissioner Hunt and the Medical Director, Dr. Prescott, to the Masters and Deputy Masters of the institutions of the department, the same earnest spirit of helpfulness has been displayed, the same desire to assist in all ways the Commissioner in his endeavor to administer the affairs of the department in the manner best conducive to the interests of the city and of those who have been placed in his charge and care.

It is also a pleasure to state that the work of all connected with the department has been such as to commend itself to the Commissioner, and in closing my report I desire to thank its employees for the interest and zeal displayed in the work assigned them.

I respectfully refer your Honor to the accompanying tables of statistics relating to the work of the department.

ERNEST C. MARSHALL,

Commissioner.

EXPENDITURES FOR HOUSE OF CORRECTION, DEER ISLAND.

Salaries :

James R. Gerrish, Master . . \$2,500 00

Employees 44,396 67

\$46,896 67

Subsistence supplies for officers and inmates,

55,428 70

Repairs and alterations

15,357 20

Clothing and bedding, including materials

for making same

12,613 74

Fuel and gas coal

11,269 79

Furniture and household supplies . .

4,322 45

Food for animals, agricultural implements

and supplies

3,339 74

Electrical light plant

2,530 22

Water-rates

2,500 00

Medical supplies and surgical

instruments

\$520 81

Liquors

261 09

781 90

Stationery and postage

596 64

Soap and laundry supplies

508 09

Oils

397 38

Religious services

393 87

Telephone service

319 74

Tobacco

305 73

Cartage

288 35

Books and papers

189 89

Insurance

137 75

Services of expert accountant

100 00

Printing

89 30

Expert work on dietary

84 95

Entertainment for inmates

60 00

Advertising

53 13

Transportation

7 63

Labor and material, manufacturing sale

goods

4,466 91

Stone Department:

Mechanical labor \$2,520 00

Stone 16,238 91

Freights 1,947 89

Tools 989 09

21,695 89

Total

\$184,735 66

FOR HOUSE OF CORRECTION, SOUTH BOSTON.

Salaries :

John C. Whiton, Master . . .	\$2,500 00	
All other employees . . .	29,125 61	
		\$31,625 61
Subsistence supplies for officers and inmates,		26,581 52
Fuel and gas coal		6,628 59
Clothing and bedding, including		
material for making same for .		
inmates	\$3,000 55	
Repairs on sewing machines, trim-		
mings and material used in		
manufacturing sale goods .	1,396 83	
		4,397 38
Water-rates		2,178 20
Repairs and alterations		2,079 59
Religious services		1,154 04
Soap and laundry supplies		1,088 53
Furniture and household supplies		1,081 35
Feed for animals, agricultural implements		
and supplies		1,064 29
Tobacco		597 00
Ice		514 25
Gratuities		492 00
Medical supplies and surgical		
instruments	\$309 01	
Liquors	25 40	
		334 41
Stationery and postage		221 61
Entertainment for inmates		190 00
Books and papers		173 55
Printing		171 74
Telephone service		165 15
Insurance		139 00
Travelling expenses		77 44
Gas		71 00
Returning escaped prisoners		50 00
Services of expert accountant		50 00
Expert work on dietary		47 45
Oils		34 74
Advertising		32 39
Cartage and freight		15 51
Total		\$81,256 34

FOR OFFICE EXPENSES.

Salaries:

Ernest C. Marshall, Commissioner	\$5,000 00	
Thomas F. Hunt, Deputy Commissioner	2,500 00	
Wm. H. Prescott, Medical Director to August 1, 1897, ...	1,850 00	
Wm. H. Prescott, Medical Director from August 1, 1897, ...	208 33	
Hubert Pope, Secretary	2,500 00	
Clerk-hire	6,299 98	
		\$18,358 31
Stationery		805 40
Printing		591 04
Telephone service		413 75
Buggy		206 00
Horse-keeping		93 25
Office expenses		82 54
Travelling expenses		57 62
Total		\$20,607 91

FOR STEAMER "J. PUTNAM BRADLEE."

Crew	\$9,737 47
Fuel	2,406 59
Rent of Sargent's Wharf	2,000 00
Repairs	1,279 67
Use of steamer during repairs	560 00
Furnishings	312 88
Chandlery and supplies	211 60
Water-rates	200 00
Telephone service	105 12
Repairs on wharf	85 00
Total	\$16,898 33

FOR STEAMER "JOHN HOWARD."

Crew	\$3,065 00
Repairs	1,028 66
Chandlery and supplies	308 97
Furnishings	100 72
Life-boat	66 00
Board of crew	54 50
Water-rates	50 00
Use of tow-boats	50 00
Total	\$4,723 85

FOR SUMMER HOSPITAL, RAINSFORD ISLAND.

Employees	\$2,900 67
Subsistence supplies	1,848 36
Repairs	305 72
Medical supplies	\$207 74
Liquors	11 35
	219 09
Clothing and bedding	134 22
Furniture and household supplies	90 89
Soap	29 59
Stationery	12 78
Total	<u>\$5,541 32</u>

RECAPITULATION OF EXPENDITURES.

House of Correction, Deer Island	\$184,735 66
House of Correction, South Boston	81,256 34
Office expenses	20,607 93
Steamer "J. Putnam Bradlee"	16,898 31
Steamer "John Howard"	4,723 85
	\$308,222 09
Summer Hospital, Rainsford Island	5,541 32
	<u>\$313,763 41</u>

The sum of \$337.63 was received during the past year on account of interest on the Mason Fund.

Statement of the accounts rendered on account of income of the institutions for the year ending January 31, 1898 :

House of Correction, Deer Island	\$43,032 59
House of Correction, South Boston	16,320 48
	<u>\$59,353 07</u>

The sources from which these accounts have been derived are as follows:

HOUSE OF CORRECTION, DEER ISLAND.

Stone	\$30,905 41
Labor of inmates	9,770 40
Board of paupers	1,194 98
Sale of barrels	484 70
Milk	110 13
Vegetables	107 60
Coal	83 35
Use of team	83 12
Sale of pigs	79 00
Sale of rags	69 11
Sale of bones	54 44
Sale of junk	51 35
Sale of Brogans	30 00
Sale of cloth	4 00
Sale of ice	2 70
Killing pigs	2 00
Vinegar	30
	\$43,032 59

HOUSE OF CORRECTION, SOUTH BOSTON.

Labor of inmates	\$15,486 30
Sale of bones and grease	529 09
Sale of empty barrels	197 79
Sale of junk	79 06
Sale of coal tar	16 00
Sale of rags	12 24
	\$16,320 48

Comparison of expenditures for the years ending January 31, 1897, and January 31, 1898 :

	EXPENDITURES FOR TWELVE MONTHS.		Increase.	Decrease.
	Ending Jan. 31, 1897.	Ending Jan. 31, 1898.		
House of Correction, Deer Island	\$171,609 47	\$184,735 66	\$13,126 19	
House of Correction, South Boston	96,559 78	81,256 34	.....	\$15,303 44
Office expenses.....	22,067 71	20,607 91	.....	1,459 80
Steamer "J. Putnam Bradlee".....	24,840 02	16,898 33	.....	7,941 69
Steamer "John How- ard"	359 70	4,723 85	4,364 15	
Total.....	\$315,436 68	\$308,222 09	\$17,490 34	\$24,704 93
Summer Hospital, Rains- ford Island		\$5,541 32		
Total expenditures for 1897 and 1898...		\$313,763 41		

Increase as above	.	.	.	.	.	\$17,490 34
Decrease as above	.	.	.	.	.	24,704 93
Net decrease	.	.	.	.	.	<u>\$7,214 59</u>

Comparison of accounts rendered on account of income of the institutions for the years ending January 31, 1897, and January 31, 1898 :

	INCOME FOR ONE YEAR.		Increase.	Decrease.
	Ending Jan. 31, 1897.	Ending Jan. 31, 1898.		
House of Correction, Deer Island.....	\$62,476 49	\$43,032 59	.....	\$19,443 90
House of Correction, South Boston	21,225 07	16,320 48	.....	4,904 59
Total.....	\$83,701 56	\$59,353 07	.....	\$24,348 49

Decrease in accounts rendered on account of income for the year ending January 31, 1898, \$24,348.49.

Actual cost of conducting the Institutions for the year ending January 1, 1898:

	Expended.	Actual income.	Actual cost.
House of Correction, Deer Island.....	\$184,735 66	\$38,365 48	\$146,370 18
House of Correction, South Boston	81,256 34	15,782 87	65,473 47
Office expenses	20,007 91	.....	20,007 91
Steamer "J. Putnam Bradlee"	16,898 33	.....	16,898 33
Steamer "John Howard".....	4,723 85	.....	4,723 85
Summer Hospital, Rainsford Island....	5,541 32	.....	5,541 32
Total	\$313,763 41	\$54,148 35	\$259,615 06

Total expenditures for above, for year ending
 January 31, 1897, without summer hospital, \$315,436 68
 Total expenditures for above, less summer
 hospital, year ending January 31, 1898 . 308,222 09
 Decrease for year ending January 31, 1898 . \$7,214 59

Average number inmates for years 1897 and 1898:

	1897.	1898.	Increase.	Decrease.
House of Correction, Deer Island.....	1,609	1,728	119	....
House of Correction, South Boston....	572	526	....	46
Total	2,181	2,254	119	46

The average expenditure for, and actual cost of, each inmate for year ending January 31, 1898:

	EXPENDITURES.		ACTUAL COST.	
	Per Year.	Per Week.	Per Year.	Per Week.
House of Correction, Deer Island....	\$106 91	\$2 06	\$84 70	\$1 63
House of Correction, South Boston...	154 48	2 97	124 47	2 39

APPENDIX.

HOUSE OF CORRECTION, DEER ISLAND,
BOSTON HARBOR, February 1, 1898.

ERNEST C. MARSHALL, ESQ.,

Penal Institutions Commissioner :

DEAR SIR: I herewith submit my annual report for the year ending January 31, 1898.

There have been committed during the past year 10,954 inmates, an increase of 328 over last year. Our largest numbers during the year have been 1,485 males, 433 females, 1,918 total; our smallest numbers during the same period were 1,203 males, 287 females, 1,490 total.

We hope there may be a revival in business during the coming year that will cause a demand for mechanics and laborers, thereby making employment for some of the able-bodied inmates who are now with us, and who have not friends who will provide them with better homes. We would be relieved of many who consider the Institution their home when work cannot be gotten, and who do not fear a sentence during the cold months. We have with us a class of unfortunates who, by reason of the loss of one or more limbs, cannot work. They live through the warm months by peddling, but are obliged to find a home in some institution during cold weather. To many it may be a matter of surprise that these people prefer to come to a penal institution when both our City and State provide such comfortable pauper homes, but even in those dependent, pride shows itself in many ways. Many of them, while taking a sentence with thanks, would not even ask to be admitted to a pauper home, they entertaining the idea that while in prison they still maintain their independence, whereas a pauper home would brand them as dependent.

We have enlarged our bake-house, giving us one oven more and six additional rooms for officers.

We have established a library, which is much appreciated. We have in it some 3,000 books. Adjoining the library is a large assembly room furnished for officers. It is occupied by them each evening for social entertainment, and on Friday evenings only a lecture and praise meeting is participated in.

On December 11, at about four o'clock P.M., Ward A (our nursery wing of the hospital) was discovered to be on fire.

We promptly notified headquarters and they responded with the Fire-boat Engine 44, which did good service. The town of Winthrop sent a hose-wagon and their chemical engine. The police-boat "Guardian," under Deputy Superintendent Bragdon, came, ready for any emergency, and with our own fire department, manned by officers and inmates, did valuable service. It looked at one time as if the whole hospital must go, but in less than an hour the fire was under control, with a loss to us of about \$4,500. If our supply of water had been better the loss would have been much less. Workmen are now engaged rebuilding, and the wing will be ready for occupancy in May.

I would again call your attention to the need of a new prison for women. The one now in use is the building formerly occupied by the House of Reformation and Truant School boys. It is not adapted for its present use, being at all times overcrowded. A new building, containing not less than 500 cells, with a chapel and modern laundry connected, should be erected. The laundry now in use was never expected to do the work for over 800 people. The work is all done by hand, and could be more satisfactorily done so if the laundry building was larger. We do all the washing for the 2,000 people on this island, as well as the washing for the officers and boys of Rainsford Island, and during the summer months the washing for the Children's Summer Hospital. We have labor and muscle enough to accomplish all this work. What we need is a new plant better adapted for doing it, such as a new building could be made to provide.

Our steamboat and coal wharves are in very bad condition. The piling and planking is decayed, making it unsafe for travel, and should be rebuilt.

On January 1 we were obliged to suspend work on the piece price plan, and have not as yet made arrangements for keeping our sewing machines running. While I can keep all the able-bodied men at work on the farm, I would like in some way to derive an income. A broom-shop would furnish labor for some fifty men and provide all the brooms needed for this and other institutions. The expense would be only for corn and wire, as we could make our own handles.

Our farm and live stock is in very good condition. We have raised during the past year the following products:

Apples . . .	50 bbls. . .	\$2 50	\$125 00
Asparagus . .	2,500 bunches .	08	200 00
Beans, bush. . .	142 bush. . .	50	71 00
<i>Carried forward</i>			\$396 00

<i>Brought forward</i>				\$396 00
Beans, lima . . .	40 bush. . .	75		30 00
Beets, mangle . .	205 tons . .	\$12 00		2,460 00
“ table . . .	560 bush. . .	40		224 00
Cabbage . . .	25,000 heads . .	02		500 00
Carrots . . .	3,000 bush. . .	25		750 00
Cauliflower . . .	75 heads . .	08		6 00
Celery . . .	6,520 bunches . .	08		521 60
Chickens . . .	336 lbs. . .	16 $\frac{2}{3}$		56 00
Corn, fodder and ensilage . . .	337 tons . .	4 00		1,348 00
Cucumbers . . .	267 bush. . .	1 00		267 00
Currants . . .	29 qts. . .	06		1 74
Ducks . . .	132 lbs. . .	06		7 92
Eggs . . .	1,150 doz. . .	20		230 00
Grapes . . .	4 bush. . .	1 00		4 00
Greens, beet . .	187 bush. . .	25		46 75
“ cabbage . . .	400 “ . .	10		40 00
“ dandelion . .	340 “ . .	10		34 00
“ spinach . . .	400 “ . .	15		60 00
Gooseberries . .	9 qts. . .	10		90
Hay . . .	142 tons . .	13 00		1,846 00
Ice . . .	1,300 tons . .	2 00		2,600 00
Lettuce . . .	5,050 heads . .	01		50 50
Manure . . .	1,252 cords . .	2 50		3,130 00
Melons . . .	23 bu. . .	1 00		23 00
Milk . . .	148,700 qts. . .	05		7,435 00
Oat and rye fodder, . .	76 tons . .	10 00		760 00
Onions . . .	4,650 bush. . .	75		3,487 50
Parsnips . . .	1,680 “ . .	30		504 00
Peas . . .	160 “ . .	75		120 00
Pears . . .	28 “ . .	60		16 80
Peppers . . .	4 “ . .	75		3 00
Plants (bedding) . .	958 doz. . .	1 00		958 00
Potatoes . . .	312 bush. . .	90		280 80
Pumpkins . . .	12 tons . .	25 00		300 00
Radishes . . .	750 bunches . .	02		15 00
Raspberries . . .	156 qts. . .	08		12 48
Rhubarb . . .	1,200 lbs. (per hundred) . .	80		9 60
Rye . . .	62 bush. . .	50		31 00
Salsify . . .	12 “ . .	50		6 00
Squash . . .	41 tons . .	20 00		840 00
Strawberries . . .	205 qts. . .	08		16 40
Tomatoes . . .	1,280 bush. . .	40		51 20
Turkeys . . .	90 lbs. . .	16 $\frac{2}{3}$		15 00
Turnips . . .	4,000 bush. . .	25		1,000 00
Wood . . .	356 cords . .	2 00		712 00

 \$31,207 19

We have a good breed of hogs in our piggery. The following figures show expenses and income :

Pork slaughtered, 69,924 lbs. @ 7	
cents	\$4,894 68
Sale of live pigs	79 00
Sale of soap grease	19 00
375 cords of manure @ \$2.50	937 50
815 hhd. soft soap @ \$5	4,075 00
	\$10,005 18
Cost of soap stock	77 23
	\$9,927 95

We are using oil, gas and electricity at the present time for lighting. With one more engine and boiler added to our dynamo plant we would have enough power to use electric lights all round, which would be more economical than either oil or gas is. In the women's department oil is being used. This building could be wired for electric lights at a very small expense and could be lighted without any addition to the plant.

The chaplain and priest have labored hard, and have accomplished much good for the people of this and the other institutions in the harbor.

My deputy and able corps of officers labor with zeal to keep the discipline at a high standard. They have my confidence and thanks.

There have been 1,490 prisoners whose fines have been paid during the year, the amount received thereby being \$10,337.88. This does not go to the credit of the Institution.

We have made for the use of inmates 2,440 pairs brogans, 684 pairs women's slippers, 696 pairs women's shoes, 800 institution coats, 1,445 institution pants, 718 institution vests, 675 liberty coats, 634 liberty pants, 648 liberty vests, 179 dozen cotton shirts, 214 dozen woollen shirts, 263 dozen overalls, 5 dozen waiters' coats, 268 hospital nightshirts, 72 carpenters' aprons, 20 pairs men's drawers, 821 chemises, 1,035 skirts, 1,038 dresses, 566 aprons, 778 pairs drawers, 439 tires, 350 head handkerchiefs, 2,466 sheets, 729 pillow-slips, 24 bed-ticks, 4 bed-spreads, 3,061 towels, 334 roller-towels, 69 table-cloths, 3 clothes-bags, 22 bakers' caps, 12 coffee-bags, 141 pairs men's woollen socks, 164 nightdresses and 206 stand covers.

We have also made for the Boston Almshouse and Hospital, Long Island, 404 coats, 276 vests, 277 pants, 8 over-

coats and 3 shirts; for the House of Reformation, Rainsford Island, 6 dozen woollen shirts, $30\frac{7}{12}$ dozen cotton shirts, $15\frac{8}{12}$ dozen liberty shirts, and 1 dozen drawers; for the Charlestown Almshouse, Charlestown, 22 coats, 32 vests, 47 pants, $41\frac{10}{12}$ dozen woollen shirts, and $6\frac{2}{12}$ pairs woollen drawers.

During the year there has been given to discharged inmates about 7,000 articles of clothing.

The stone department has had an average of 150 men employed daily. They have cut 52,545 feet edgestone, 170 catch-basins, 310 curb-corners and 199 extra guttermouths. There is on hand finished, 8,876 feet edgestone, 62 catch-basins, 36 curb corners and 1,800 paving-blocks. In rough stock we have 3,200 feet edgestone and 6 catch-basins. We have shipped during the year 50,982 feet edgestone, 132 catch-basins, 351 curb-corners and 33 gutter-stones.

The reports of the Chaplain and Resident Physician, with the usual statistics, are annexed.

Thanking you and Assistant Commissioner Hunt for courtesies extended, I am,

Yours very truly,

JAMES R. GERRISH,

Master.

VALUE OF LAND AND BUILDINGS AT HOUSE OF CORRECTION, DEER ISLAND.

Land.

134 acres at \$600 (or 5,837,040 ft. upland)	\$80,400
2,178,000 feet flats	1,000
10,000 " solid wharf at \$1	10,000
16,900 " pile oak at \$1	16,900
3,600 " spruce at 50 cents	1,800
Value of land (8,045,540 ft.)	\$110,100

Buildings.

New prison	\$100,000
House of Correction, including gas works and boiler-house	300,000
Women's department	35,000
Laundry	15,000
Bakery (brick)	13,000

Carried forward \$463,000 \$110,100

<i>Brought forward</i>	\$463,000	\$110,100
Bakery (addition)	1,500	
Coal sheds (wood)	12,000	
Receiving-house	12,000	
Mechanics' shop	11,000	
Engineers' house	8,000	
Vegetable shed (wood)	7,000	
Farmers' house (brick)	6,500	
School building	7,000	
Barn (wood)	5,000	
Straw shed and hennery	1,000	
Cow barn	1,000	
Boat-house and wharf	800	
Ferry-house	700	
Ice-house	2,000	
Stone-shed	800	
New piggery	12,000	
Hospital	50,000	
Blacksmith shop	500	
Pumping-station	5,000	
Dynamo and building	15,000	
		621,800
Total		<u>\$731,900</u>

HOUSE OF CORRECTION, DEER ISLAND.

Inventory of Property on Hand, February 1, 1898.

General care :

Inmates	\$16,394 65
Officers	4,138 42

Clothing :

Males	5,305 98
Females	1,786 04

Sewing-room :

Males	3,638 00
Females	1,270 80

Hospital :

Officers	628 70
Inmates	957 73
Dispensary	768 70

Carried forward \$34,889 02

<i>Brought forward</i>	.	.	.	.	.	\$34,889 02
Subsistence :						
Officers .	.	.	.	.	.	153 50
Inmates	.	.	.	.	.	16 00
Subsidiary	.	.	.	.	.	6,035 24
Engineer's Department	.	.	.	.	.	1,546 52
Painting	"	.	.	.	.	633 72
Carpenters	"	.	.	.	.	883 68
Shoe	"	.	.	.	.	912 17
Laundry	"	.	.	.	.	1,117 87
Agricultural	"	.	.	.	.	11,837 97
Stone	"	.	.	.	.	9,372 14
Caning	"	.	.	.	.	133 43
Baker's	"	.	.	.	.	204 21
Store .	.	.	.	.	.	2,812 02
Miscellaneous	.	.	.	.	.	885 27
Total .	.	.	.	.	.	<u>\$71,432 76</u>

STATISTICAL TABLES.

TABLE NO. 1.

Showing Population for Year ending January 31, 1898.

	Males.	Females.	Total.
Remaining January 31, 1897	1,419	346	1,765
Committed during the year	9,540	1,414	10,954
	10,959	1,760	12,719
Discharged during the year	9,664	1,372	11,036
Remaining January 31, 1898	1,295	388	1,683

Children of sentenced mothers:

Remaining January 31, 1897	10
Admitted	33
	43
Discharged	32
Remaining January 31, 1898	11
During the year 4 children died.	

TABLE NO. 2.

Showing Number of Prisoners Received each Month.

	Males.	Females.	Total.
Remaining January 31, 1897.....	1,419	346	1,765
Received in February, “	579	68	647
“ “ March, “	741	103	844
“ “ April, “	798	130	928
“ “ May, “	885	112	997
“ “ June, “	969	151	1,120
<i>Carried forward</i>	5,391	910	6,301

TABLE NO. 2.—*Concluded.*

	Males.	Females.	Total.
<i>Brought forward</i>	5,391	910	6,301
Received in July, 1897	872	138	1,010
“ “ August, “	962	139	1,101
“ “ September, “	873	143	1,016
“ “ October, “	775	120	895
“ “ November, “	704	101	805
“ “ December, “	759	99	858
“ “ January, 1898	623	110	733
Total	10,959	1,760	12,719
Discharged during the year	9,664	1,372	11,036
Remaining January 31, 1898	1,295	388	1,683

TABLE NO. 3.

Showing Number Discharged each Month.

	Males.	Females.	Total.
Discharged during February, 1897	733	95	828
“ “ March, “	756	108	864
“ “ April, “	798	130	928
“ “ May, “	792	113	905
“ “ June, “	943	107	1,050
“ “ July, “	892	103	995
“ “ August, “	878	106	984
“ “ September, “	866	138	1,004
“ “ October, “	837	123	960
“ “ November, “	731	113	844
“ “ December, “	730	131	861
“ “ January, 1898	708	105	813
Total	9,664	1,372	11,036

TABLE NO. 4.

Daily Average.

	Males.	Females.	Total.
February	1,321	325	1,646
March	1,246	314	1,560
April	1,250	304	1,554
May	1,281	316	1,597
June	1,340	346	1,686
July	1,389	374	1,763
August	1,413	403	1,816
September	1,450	424	1,874
October	1,418	415	1,833
November	1,357	423	1,780
December	1,393	381	1,774
January, 1893	1,307	388	1,695
Maximum population	1,485	433	1,918
Minimum population	1,203	287	1,490
Daily average for year	1,350	368	1,718

TABLE NO. 5.

Showing how Discharged.

	Males.	Females.	Total.
Expired sentence	5,797	1,149	6,946
Pardoned	2,408	145	2,553
Fine paid	1,422	68	1,490
Died	20	10	30
Transferred to House of Correction, South Boston	8	.....	8
<i>Carried forward</i>	9,655	1,372	11,027

TABLE NO. 5.—*Concluded.*

	Males.	Females.	Total.
<i>Brought forward</i>	9,655	1,372	11,027
By order of Court.....	4	.....	4
Escaped	3	.....	3
Bailed	1	.....	1
Transferred to Massachusetts Reformatory, Concord.....	1	.....	1
Total.....	9,664	1,372	11,036

TABLE NO. 6.

Showing Number of Times Committed for Drunkenness.

	Males.	Females.	Total.
First.....	2,788	295	3,083
Second	1,078	175	1,253
Third	701	100	801
Fourth	487	78	565
Fifth	399	61	460
Sixth	287	54	341
Seventh	205	37	242
Eighth	175	23	198
Ninth	139	23	162
Tenth	113	19	132
Eleventh.....	112	14	126
Twelfth	96	18	114
Thirteenth.....	86	21	107
Fourteenth	75	14	89
Fifteenth	52	12	64
<i>Carried forward</i>	6,793	944	7,737

TABLE NO. 6.—*Continued.*

	Males.	Females.	Total.
<i>Brought forward</i>	6,793	944	7,737
Sixteenth	60	10	70
Seventeenth	53	9	62
Eighteenth	44	10	54
Nineteenth	35	15	50
Twentieth	24	15	39
Twenty-first	18	6	24
Twenty-second	17	3	20
Twenty-third	23	8	31
Twenty-fourth	27	2	29
Twenty-fifth	25	9	34
Twenty-sixth	18	2	20
Twenty-seventh	17	3	20
Twenty-eighth	16	2	18
Twenty-ninth	18	2	20
Thirtieth	20	3	23
Thirty-first	14	3	17
Thirty-second	16	2	18
Thirty-third	7	3	10
Thirty-fourth	11	2	13
Thirty-fifth	10	.....	10
Thirty-sixth	9	4	13
Thirty-seventh	6	3	9
Thirty-eighth	6	1	7
Thirty-ninth	5	1	6
Fortieth	3	.....	3
Forty-first	3	.....	3
<i>Carried forward</i>	7,298	1,062	8,360

TABLE NO. 6.—*Continued.*

	Males.	Females.	Total.
<i>Brought forward</i>	7,298	1,062	8,360
Forty-second	1	2	3
Forty-third	1	.....	1
Forty-fourth	3	2	5
Forty-fifth	3	2	5
Forty-sixth	5	.....	5
Forty-seventh	5	1	6
Forty-eighth	2	.....	2
Forty-ninth	2	.....	2
Fiftieth	3	.....	3
Fifty-first	1	1	2
Fifty-second .....	.....	2	2
Fifty-third	3	.....	3
Fifty-sixth	1	.....	1
Sixty-third	1	.....	1
Sixty-fourth	1	2	3
Sixty-fifth	1	2	3
Sixty-seventh .....	.....	1	1
Sixty-eighth	1	1	2
Sixty-ninth	2	1	3
Seventieth	2	.....	2
Seventy-first	2	.....	2
Seventy-second	3	.....	3
Seventy-third	2	.....	2
Seventy-fourth	2	.....	2
Seventy-seventh	1	.....	1
<i>Carried forward</i>	7,346	1,079	8,425

TABLE NO. 6.—*Concluded.*

	Males.	Females.	Total.
<i>Brought forward</i>	7,346	1,079	8,425
Seventy-eighth.....	3	.....	3
Eighty-ninth.....	2	.....	2
Ninetieth	3	.....	3
Ninety-first	1	.....	1
Ninety-second	1	.....	1
Ninety-third	1	.....	1
Ninety-sixth .....	.....	1	1
Total	7,357	1,080	8,437

TABLE NO. 6A.

Showing Number of Times Committed as Common Drunkards.

	Males.	Females.	Total.
First .....	.....	2	2
Second .....	.....	2	2
Third .....	.....	1	1
Fourth .....	.....	1	1
Fifth	2	.....	2
Seventh	1	.....	1
Ninth .....	.....	1	1
Total	3	7	10

TABLE NO. 6B.

Showing Number of Times Committed for Offences other than Drunkenness.

	Males.	Females.	Total.
First.....	1,243	169	1,412
Second.....	293	47	340
Third.....	160	35	195
Fourth.....	90	17	107
Fifth	75	16	91
Sixth	55	4	59
Seventh.....	41	4	45
Eighth.....	31	2	33
Ninth.....	33	4	37
Tenth	25	1	26
Eleventh.....	15	2	17
Twelfth.....	11	6	17
Thirteenth.....	12	3	15
Fourteenth.....	9	2	11
Fifteenth	12	2	14
Sixteenth	8	.....	8
Seventeenth.....	13	.....	13
Eighteenth	5	3	8
Nineteenth	4	1	5
Twentieth	4	.....	4
Twenty-first	5	.....	5
Twenty-second	3	3	6
Twenty-third	2	1	3
Twenty-fourth.....	2	1	3
Twenty-fifth	1	.....	1
<i>Carried forward.....</i>	2,152	323	2,475

TABLE NO. 6B.—*Concluded.*

	Males.	Females.	Total.
<i>Brought forward</i>	2,152	323	2,475
Twenty-sixth	2	.....	2
Twenty-seventh.....	4	.....	4
Twenty-eighth.....	3	.....	3
Twenty-ninth.....	3	.....	3
Thirtieth	1	.....	1
Thirty-first	1	1	2
Thirty-third	2	1	3
Thirty-fourth .....	.....	1	1
Thirty-fifth	2	.....	2
Thirty-seventh.....	4	.....	4
Thirty-eighth	2	.....	2
Thirty-ninth	1	.....	1
Forty-third	1	1	2
Forty-fifth	1	.....	1
Seventy-third	1	.....	1
Total.....	2,180	327	2,507

TABLE NO. 7.

Showing from what Courts Committed.

	Males.	Females.	Total.
Municipal Court (Central).....	4,960	961	5,921
Roxbury District Court.....	1,254	142	1,396
South Boston District Court.....	1,066	161	1,227
Charlestown District Court.....	716	39	755
Dorchester District Court.....	507	17	524
<i>Carried forward</i>	8,503	1,320	9,823

TABLE NO. 7.—*Concluded.*

	Males.	Females.	Total.
<i>Brought forward</i>	8,503	1,320	9,823
East Boston District Court.....	423	15	438
Superior Criminal Court.....	140	64	204
Brighton District Court.....	182	3	185
Chelsea Police Court.....	161	6	167
West Roxbury District Court.....	131	6	137
Total.....	9,540	1,414	10,954

TABLE NO. 8.

Offences for which Committed.

	Males.	Females.	Total.
Drunkenness.....	7,357	1,080	8,437
Larceny.....	578	39	617
Assault and battery.....	541	24	565
Vagrant.....	316	24	340
Idle and disorderly.....	121	49	170
Fornication.....	69	70	139
Walking on railroad track.....	137	.....	137
Common nightwalker.....	.....	79	79
Disturbing the peace.....	30	13	43
Non-support.....	38	.....	38
Breaking glass.....	33	2	35
Trespass.....	35	.....	35
Obstructing sidewalk.....	34	.....	34
Embezzlement.....	25	.....	25
<i>Carried forward</i>	9,314	1,350	10,664

TABLE NO. 8.—*Continued.*

	Males.	Females.	Total.
<i>Brought forward</i>	9,314	1,380	10,694
Keeping a disorderly house.....	8	12	20
Profanity.....	15	.....	15
Assault and battery on officer.....	14	.....	14
Lying on grass in Common.....	12	.....	12
Pedling without a license.....	10	.....	10
Common drunkard.....	3	7	10
Assault.....	9	.....	9
Larceny from person.....	8	.....	8
Receiving stolen goods.....	8	.....	8
Fraudulently conveying property.....	7	1	8
Unlawful appropriation.....	6	1	7
Unlawfully keeping and exposing for sale intoxicating liquors.....	6	1	7
Gaming on the Lord's day.....	7	.....	7
Making an affray.....	6	.....	6
Indecent assault	6	.....	6
Vagabond	4	2	6
Indecent exposure	6	.....	6
Cruelty to animals	6	.....	6
Throwing missiles	5	.....	5
Common railer and brawler.....	2	2	4
Obtaining money by false pretences...	4	.....	4
Violation of city ordinance	4	.....	4
False pretences	4	.....	4
Rescuing a prisoner	3	1	4
Malicious injury to property.....	4	.....	4
<i>Carried forward</i>	9,481	1,407	10,888

TABLE NO. 8.—*Continued.*

	Males.	Females.	Total.
<i>Brought forward</i>	9,481	1,407	10,888
Assault and battery with dangerous weapon.....	3	1	4
Obscenity.....	3	1	4
Obtaining property by false pretences,	3	.....	3
Malicious injury to real estate	3	.....	3
Keeping a house of ill-fame	2	1	3
Loitering in a railroad station	3	.....	3
Stubborn child.....	3	.....	3
Assault and battery with a knife.....	3	.....	3
Entering a building without permis- sion	3	.....	3
Discharging firearms in street	3	.....	3
Lewd and lascivious person	3	.....	3
Throwing snowballs in the street	3	.....	3
Having milk not of a standard quality,	2	.....	2
Larceny from building	1	1	2
Fast riding.....	2	.....	2
Disturbance in public conveyance.....	2	.....	2
Concealing leased property.....	1	1	2
Lewd and lascivious cohabitation .....	.....	1	1
Fraudulently obtaining entertainment at an inn.....	1	.....	1
Permitting horse to run at large	1	.....	1
Doing business on the Lord's day.....	1	.....	1
Threats.....	1	.....	1
Contempt of Court.....	1	.....	1
Playing ball in the street	1	.....	1
<i>Carried forward</i>	9,530	1,413	10,943

TABLE NO. 8.—*Concluded.*

	Males.	Females.	Total.
<i>Brought forward</i>	9,530	1,413	10,943
Promoting lottery	1	.....	1
Assault with intent to steal	1	.....	1
Making bonfire in the street	1	.....	1
Delivering intoxicating liquor to a prisoner	1	.....	1
Unlawfully obstructing street	1	.....	1
Loitering in street	1	.....	1
Assault with razor	1	.....	1
Breaking and entering	1	.....	1
Attempt to rescue prisoner	1	.....	1
Keeping an unlicensed dog	1	.....	1
Keeping a common liquor nuisance ...	.....	1	1
Total	9,540	1,414	10,954

TABLE NO. 9.

Showing Sentences of those Committed.

	Males.	Females.	Total.
Non-payment of fines	5,478	345	5,823
1 day	1	.....	1
3 days	9	1	10
5 "	26	1	27
7 "	1	.....	1
10 "	81	3	84
11 " .....	.....	1	1
15 " .....	.....	2	2
30 "	27	3	30
<i>Carried forward</i>	5,623	356	5,979

TABLE NO. 9.—*Concluded.*

	Males.	Females.	Total.
<i>Brought forward</i>	5,623	356	5,979
54 days	1	.....	1
60 "	10	.....	10
90 "	6	.....	6
1 month	452	55	507
2 months	741	123	864
3 "	1,123	249	1,372
2 months and 60 days	1	.....	1
4 months	611	259	870
5 "	206	51	257
6 "	578	241	819
7 "	11	2	13
8 "	19	8	27
9 "	76	40	116
10 "	2	3	5
11 "	1	.....	1
12 "	64	25	89
18 "	6	2	8
24 "	4	.....	4
30 "	3	.....	3
42 "	2	.....	2
Total	9,540	1,414	10,954

Of the above, 1 man who had escaped was returned to serve the remainder of his sentence; 11 men and 8 women were transferred from the House of Correction, South Boston; 3 men were committed under bonds for 6 months, 1 man for 4 months, and 1 man for 3 months.

TABLE NO. 10.*Showing Ages of Prisoners when Committed.*

	Males.	Females.	Total.
Under 20 years.....	240	14	254
20 to 29 inclusive.....	2,729	401	3,130
30 " 39 "	3,216	549	3,765
40 " 49 "	2,004	272	2,276
50 " 59 "	976	114	1,090
60 " 69 "	325	50	375
70 " 79 "	46	9	55
80 " 89 "	4	5	9
Total.....	9,540	1,414	10,954

TABLE NO. 11.*Color.*

	Males.	Females.	Total.
White	9,346	1,368	10,714
Black	189	46	235
Yellow	2	.....	2
Red	3	.....	3
Total.....	9,540	1,414	10,954

TABLE NO. 12.*Social Relations.*

	Males.	Females.	Total.
Married	2,503	691	3,194
Single	7,037	723	7,760
Total.....	9,540	1,414	10,954

TABLE NO. 13.

Education.

	Males.	Females.	Total.
Could read and write.....	8,356	1,049	9,405
Could read only.....	9	1	10
Could neither read nor write.....	1,175	364	1,539
Total	9,540	1,414	10,954

TABLE NO. 14.

Nativity.

	Males.	Females.	Total.
Massachusetts	3,469	388	3,857
Maine	284	50	334
New York	262	34	296
New Hampshire	96	23	119
Rhode Island	107	6	113
Connecticut.....	72	7	79
Pennsylvania	56	6	62
Virginia	49	11	60
Vermont	44	6	50
Maryland.....	31	4	35
New Jersey.....	21	2	23
Ohio	21	2	23
North Carolina	20	3	23
Illinois	19	1	20
District of Columbia.....	13	4	17
California	12	.....	12
Kentucky.....	8	2	10
<i>Carried forward</i>	4,584	549	5,133

TABLE NO. 14.—*Continued.*

	Males.	Females.	Total.
<i>Brought forward</i>	4,584	549	5,133
Georgia	9	1	10
Tennessee	9	1	10
Missouri.....	9	.....	9
Michigan	6	1	7
South Carolina.....	6	1	7
Alabama	6	.....	6
Wisconsin	2	3	5
Indiana	5	.....	5
Delaware	5	.....	5
Louisiana	3	.....	3
Texas	3	.....	3
Florida	3	.....	3
Minnesota .....	.....	2	2
West Virginia.....	2	.....	2
Kansas	2	.....	2
Iowa	2	.....	2
Mississippi	2	.....	2
Oregon	2	.....	2
Nebraska	1	.....	1
Dakota	1	.....	1
Ireland	3,036	539	3,575
Provinces.....	614	123	737
England	387	97	484
Scotland	144	40	184
Canada	129	30	159
Sweden	131	2	133
<i>Carried forward</i>	9,103	1,389	10,492

TABLE NO. 14.—*Continued.*

	Males.	Females.	Total.
<i>Brought forward</i>	9,103	1,389	10,492
Italy	100	.....	100
Newfoundland	88	10	98
Germany	49	1	50
Norway	46	1	47
Russia	29	1	30
Wales	20	1	21
Finland	15	1	16
France	9	5	14
Poland	10	1	11
Austria	9	.....	9
West Indies	7	2	9
Denmark	6	.....	6
Hungary	4	1	5
Armenia	5	.....	5
Bermuda	5	.....	5
Switzerland	4	.....	4
Prussia	4	.....	4
At sea	4	.....	4
Belgium	2	1	3
Arabia	3	.....	3
South America	2	.....	2
Isle of Man	2	.....	2
China	2	.....	2
Gibraltar	2	.....	2
Unknown	2	.....	2
Australia	1	.....	1
<i>Carried forward</i>	9,533	1,414	10,947

TABLE NO. 14.—*Concluded.*

	Males.	Females.	Total.
<i>Brought forward</i>	9,533	1,414	10,947
Mexico	1	.....	1
Greece	1	.....	1
Turkey	1	.....	1
Holland	1	.....	1
Portugal.....	1	.....	1
Africa.....	1	.....	1
Spain.....	1	.....	1
Total	9,540	1,414	10,954

TABLE NO. 15.

Showing Industrial Relation.

	Males.	Females.	Total.
Agent	34	.....	34
Artist	3	.....	3
Actor	5	.....	5
Baker	122	.....	122
Barber	117	.....	117
Bartender	12	.....	12
Bookbinder.....	21	.....	21
Bell-boy	5	.....	5
Boiler-maker	36	.....	36
Building-mover	5	.....	5
Brakeman	52	.....	52
Butcher	73	.....	73
Bottler	4	.....	4
<i>Carried forward</i>	489	.....	489

TABLE NO. 15.—*Continued.*

	Males.	Females.	Total.
<i>Brought forward</i>	489	.....	489
Brassfinisher	21	.....	21
Broom-maker	1	.....	1
Blacksmith	112	.....	112
Box-maker.....	2	.....	2
Bricklayer	24	.....	24
Bleacher.....	2	.....	2
Brick-maker	5	.....	5
Book-keeper	6	.....	6
Carpet-layer	3	.....	3
Carpet-maker	5	.....	5
Carpenter	261	.....	261
Coal merchant	1	.....	1
Cook	106	123	229
Coachman	13	.....	13
Currier	75	.....	75
Clerk.....	116	.....	116
Carver.....	3	.....	3
Calker.....	8	.....	8
Cooper	23	.....	23
Chair-caner.....	3	.....	3
Conductor	3	.....	3
Cigar-maker	17	.....	17
Coppersmith.....	2	.....	2
Carder	10	.....	10
Clothing-cutter	14	.....	14
Candy-maker	10	.....	10
<i>Carried forward</i>	1,335	123	1,458

TABLE NO. 15.—*Continued.*

	Males.	Females.	Total.
<i>Brought forward</i>	1,335	123	1,458
Cabinet-maker.....	19	.....	19
Cork-maker	2	.....	2
Cap-maker.....	2	.....	2
Cornice-maker	5	.....	5
Dentist	1	.....	1
Diver.....	2	.....	2
Drover	5	.....	5
Druggist.....	20	.....	20
Dyer	5	.....	5
Driller.....	12	.....	12
Engineer	30	.....	30
Engraver	11	.....	11
Electrician	20	.....	20
Electroplater	2	.....	2
Electrotyper	3	.....	3
Fireman	241	.....	241
Farmer	144	.....	144
Fisherman	43	.....	43
Floor-layer	2	.....	2
Florist.....	15	.....	15
Fur-dresser	2	.....	2
Gilder	2	.....	2
Gardener	68	.....	68
Glass-blower.....	12	.....	12
Gas-fitter	9	.....	9
Granite-polisher	2	.....	2
<i>Carried forward</i>	2,014	123	2,137

TABLE NO. 15.—*Continued.*

	Males.	Females.	Total.
<i>Brought forward</i>	2,014	123	2,137
Glazier	15	.....	15
Hostler	262	.....	262
Horseshoer	35	.....	35
Harness-maker.....	28	.....	28
Hatter.....	16	.....	16
Housework .....	.....	1,087	1,087
Jeweller	10	.....	10
Janitor	9	.....	9
Laborer	3,452	.....	3,452
Lastmaker	2	.....	2
Lineman.....	14	.....	14
Leather cutter	12	.....	12
Lather.....	51	.....	51
Locksmith	2	.....	2
Loom-fixer	7	.....	7
Laundryman	2	.....	2
Laundress .....	.....	41	41
Lithographer	1	.....	1
Moulder, iron.....	105	.....	105
Moulder, brass.....	6	.....	6
Moulder, wood.....	2	.....	2
Marble worker.....	17	.....	17
Machinist	100	.....	100
Mason, stone.....	166	.....	166
Musician	11	.....	11
Mattress-maker	3	.....	3
Machine operator (sewing).....	7	.....	7
<i>Carried forward</i>	6,349	1,251	7,600

TABLE NO. 15.—*Continued.*

	Males.	Females.	Total.
<i>Brought forward</i>	6,349	1,251	7,600
Motorman	1	.....	1
Miller	1	.....	1
Miner	1	.....	1
Nurse	2	33	35
Oilcloth-maker.....	1	.....	1
Painter	231	.....	231
Plumber	81	.....	81
Printer	156	.....	156
Polisher, wood.....	63	.....	63
Piano action-maker	5	.....	5
Piano-stringer	3	.....	3
Pedler	178	.....	178
Photographer	6	.....	6
Paper-maker.....	7	.....	7
Porter.....	35	.....	35
Plasterer.....	52	.....	52
Paper-stainer	2	.....	2
Paver	19	.....	19
Paper-hanger.....	18	.....	18
Piano-tuner.....	2	.....	2
Packer.....	5	.....	5
Ropemaker	16	.....	16
Roofer.....	52	.....	52
Rigger.....	4	.....	4
Rubber-worker.....	29	.....	29
Shoemaker.....	348	.....	348
<i>Carried forward</i>	7,667	1,284	8,951

TABLE NO. 15. — *Continued.*

	Males.	Females.	Total.
<i>Brought forward</i>	7,667	1,284	8,951
Salesman.....	36	.....	36
Shovel-maker.....	2	.....	2
Sailor.....	199	.....	199
Steamfitter.....	47	.....	47
Stonecutter.....	64	.....	64
Shirtmaker.....	2	.....	2
Seamstress.....	.....	27	27
Showman.....	5	.....	5
Switchman.....	7	.....	7
Saw-setter.....	1	.....	1
Sawyer.....	6	.....	6
Surveyor.....	1	.....	1
Sailmaker.....	5	.....	5
Teamster.....	998	.....	998
Tailor.....	71	.....	71
Telegraph operator.....	4	.....	4
Trunk-maker.....	5	.....	5
Tack-maker.....	2	.....	2
Typefounder.....	3	.....	3
Tinsmith.....	44	.....	44
Upholsterer.....	27	.....	27
Umbrella-maker.....	2	.....	2
Undertaker.....	1	.....	1
Waiter.....	216	103	319
Weaver.....	51	.....	51
Wool-sorter.....	7	.....	7
<i>Carried forward</i>	9,473	1,414	10,887

TABLE NO. 15.—*Concluded.*

	Males.	Females.	Total.
<i>Brought forward</i>	9,473	1,414	10,887
Whitewasher	32	.....	32
Watchmaker.....	3	.....	3
Whipmaker.....	1	.....	1
Wheelwright.....	15	.....	15
Wood-turner.....	10	.....	10
Wire-worker.....	6	.....	6
Total	9,540	1,414	10,954

REPORT OF RESIDENT PHYSICIAN.

TO JAMES R. GERRISH, ESQ.,

Master, Deer Island Institutions :

SIR: I herewith respectfully submit the annual report of the institutions under your supervision:

OBSERVATION HOSPITAL.

Patients remaining in hospital February 1, 1897 .	8
Admitted:	
Males	183
Females	75
	258
Total	266
Discharged	241
Died	23
	264
Remaining in hospital February 1, 1898 .	2
Total	266
Largest number in hospital at one time .	20
Smallest " " " " " " .	2
Daily average	10

HOUSE OF CORRECTION HOSPITAL.

Patients remaining in hospital February 1, 1897 .	92
Admitted:	
Males	1,008
Females	547
	1,555
Total	1,647

Discharged	1,527	
Died	30	1,557
Remaining in hospital February 1, 1898		90
Total		<u>1,647</u>
Largest number in hospital at one time		109
Smallest " " " " " "		54
Daily average		<u>79</u>

RECAPITULATION.

Number of patients in hospital February 1, 1897 :		
Observation hospital	8	
House of Correction	92	
		100
Admitted :		
Observation hospital	258	
House of Correction	1,555	
		1,813
Total		<u>1,913</u>
Discharged :		
Observation hospital	241	
House of Correction	1,527	
		1,768
Died :		
Observation hospital	23	
House of Correction	30	
		53
Remaining in hospital February 1, 1898 :		
Observation hospital		2
House of Correction		90
Total		<u>1,913</u>
Largest number in hospital at one time		117
Smallest " " " " " "		64
Daily average		<u>89</u>

Deaths not reported in above tables, four prisoners' children.

DISEASES TREATED IN THE HOSPITAL OF ALL THE DEPARTMENTS.

Classified according to the Nomenclature of Diseases as published by the Royal College of Physicians of London.

DISEASES.	In Hospital Feb. 1, 1897.	Admitted.	DISCHARGED.					In Hospital Feb. 1, 1898.
			Well.	Improved.	Unimproved.	Died.	Total.	
GENERAL DISEASES.								
A.								
Measles.....		2	2				2	
Typhoid fever.....		5	4			1	5	
Peritonitis.....		1				1	1	
Febricula.....	4	30	34				34	
Intermittent fever.....		12		12			12	
Erysipelas.....		17	17				17	
Chronic malarial poisoning.....	1	62	12	49			61	2
Parotiditis.....	1	6	7				7	
Influenza		34	34				34	
B.								
Muscular rheumatism.....		12	8	4			12	
Articular “	3	40	30	6		1	37	6
“ “ chronic.....	1	10		8	2		10	1
Phthisis, pulmonalis	6	34		5	24	7	36	4
Chronic alcoholism.....	1			1			1	
Cerebral syphilis.....		1				1	1	
Opium habit.....	1	1		2			2	
Scrofulosis.....		6		6			6	
Alcoholism	6	287	287				287	6
Delirium tremens	4	187	188			3	191	
Marasmus		1				1	1	
Observation	8	50	56				56	2
Malingering		14	14				14	
General debility.....	3	79	60	12			72	10
Senility “	1	17		1	8	5	14	4
Acute tuberculosis..		6			1	5	6	

DISEASES TREATED, ETC. — *Continued.*

DISEASES.	In Hospital Feb. 1, 1897.	Admitted.	DISCHARGED.					In Hospital Feb. 1, 1898.
			Well.	Improved.	Unimproved.	Died.	Total.	
DISEASES OF NERVOUS SYSTEM.								
Apoplexy.....		2				2	2	
Paresis	1	2				3	3	
Locomotor ataxia.....	1	1			1		1	1
Hysteria		5		5			5	
Epilepsy.....	1	21			18	2	20	2
“ alcohol.....		3		3			3	
Neuralgia.....	1	17	17	1			18	
Sciatica		5	2	3			5	
Pleurodynia.....		16	14				14	2
Lumbago		8	8				8	
Vertigo		1		1			1	
DISEASES OF THE INTELLECT.								
Insanity		53			53		53	
Mania, acute.....		10			6	4	10	
Melancholia		6			6		6	
Dementia.....		6			5		5	1
“ senile	1	1			1	1	2	
False hearing		3			3		3	
Alcoholic insanity.....		11	10	1			11	
DISEASES OF THE CIRCULATORY SYSTEM.								
Functional disease of the heart.....		10		10			10	
Valvular “ “ “		12		2		9	11	1
“ “ “ “ mitral.....		4		1	3		4	
“ “ “ “ aortic		2			2		2	
DISEASES OF THE RESPIRATORY SYSTEM.								
Hemoptysis.....		14		13			13	1
Bronchitis, acute.....	4	53	44	6		1	51	6
“ chronic.....	2	3		5			5	
Asthma		10		9			9	1
Pneumonia.....	4	23	18			8	26	1

DISEASES TREATED, ETC. — *Continued.*

DISEASES.	In Hospital Feb. 1, 1897.	Admitted.	DISCHARGED.					In Hospital Feb. 1, 1898.
			Well.	Improved.	Unimproved.	Died.	Total.	
Pleurisy		6	5	1			6	...
Laryngitis.....		1		1			1	...
DISEASES OF FAUCES AND PALATE.								
Tonsillitis.....	4	24	25				25	3
“ (ulc.).....		5	5				5	...
“ (foll.).....	3	31	32				32	2
Pharyngitis.....		9	8				8	1
DISEASES OF THE DIGESTIVE SYSTEM.								
Gastritis	1	7	6				6	2
Dyspepsia		4		4			4	...
Gastro-enteritis.....		8	8				8	...
Dysentery		5	5				5	...
Diarrhoea	1	57	58				58	...
“ chronic.....		2		1			1	1
Constipation.....		3	3				3	...
Intestinal colic.....		8	8				8	...
Cholera morbus	1	35	36				36	...
Cholera morbus infantum.....		2	2				2	...
Jaundice, catarrh.....		4	4				4	...
Indigestion		12	11				11	1
Cirrhosis of liver		2			1	1	2	...
DISEASES OF THE URINARY SYSTEM.								
Bright's disease, acute		1		1			1	...
“ “ chronic	1	5			5	1	6	...
Cystitis.....	1	6	3	4			7	...
DISEASES OF WOMEN.								
Engorged breasts.....		1	1				1	...
Metritis.....		1		1			1	...
Endometritis		4		4			4	...
Vaginitis, specific.....		40	28	12			40	...
Uterine fibroid	1				1		1	...

DISEASES TREATED, ETC. — *Continued.*

DISEASES.	In Hospital Feb. 1, 1897.	Admitted.	DISCHARGED.					In Hospital Feb. 1, 1898.
			Well.	Improved.	Unimproved.	Died.	Total.	
Dysmenorrhœa		2		2			2	
Menorrhagia		6	6				6	
Pregnancy.....	2	12	6		7		13	1
Abortion.....	1	1	2				2	
Amenorrhœa		1		1			1	
Metrorrhagia	1	4		5			5	
DISEASES OF THE CUTANEOUS SYSTEM.								
Erythema.....		3	3				3	
Psoriasis		4	4				4	
Uticaria		1	1				1	
Eczema, ...		4		3	1		4	
Herpes circinatus		20	20				20	
Pedicull, capitis		3	3				3	
“ pubis		25	25				25	
VENEREAL DISEASES.								
Gonorrhœa		60	50	10			60	
Phimosis.....		2	2				2	
Paraphimosis.....		2	2				2	
Bubo.....	1	12	10	2			12	1
Chancre.....		2	2				2	
Chancroids.....	1	28	29				29	
Orchitis.....		4	2	2			4	
Stricture of urethra (org).....		8		8			8	
Syphilis.....	1	6		6			6	1
“ secondary		13		6			6	7
“ tertiary.....	2	14		14			14	2
Venereal warts.....		3	3				3	
INJURIES.								
Burns.....		4	4				4	
Man-bite.....		2	2				2	
Contusions.....	3	15	17				17	1

DISEASES TREATED, ETC. — *Continued.*

DISEASES.	In Hospital Feb. 1, 1897.	Admitted.	DISCHARGED.					In Hospital Feb. 1, 1898.
			Well.	Improved.	Unimproved.	Died.	Total.	
Contusions of eye.....	2	2	2	.....	.....	.....	2	.....
Incised wounds.....	3	2	2	.....	.....	.....	2	1
Lacerated wounds.....	20	19	19	.....	.....	.....	19	1
" " scalp.....	1	20	21	.....	.....	.....	21	.....
" " face.....	13	13	13	.....	.....	.....	13	.....
" " hands.....	4	4	4	.....	.....	.....	4	.....
" " leg.....	2	2	2	.....	.....	.....	2	.....
Bullet wound.....	2	2	2	.....	.....	.....	2	.....
Sprain of wrist.....	3	6	9	.....	.....	.....	9	.....
" " ankle.....	11	11	11	.....	.....	.....	11	.....
Dislocation of shoulder.....	3	2	2	.....	.....	.....	2	1
Fracture of inf. maxilla.....	3	3	3	.....	.....	.....	3	.....
" " radius, colles.....	2	2	2	.....	.....	.....	2	.....
" " ribs.....	1	4	5	.....	.....	.....	5	.....
" " humerus.....	1	2	3	.....	.....	.....	3	.....
" " fibula.....	3	2	2	.....	.....	.....	2	1
" " os calcis.....	1	1	1	.....	.....	.....	1	.....
UNCLASSIFIED.								
Varicose veins.....	2	2	.....	.....	2	.....	2	.....
Necrosis jaw.....	1	1	.....	1	.....	.....	1	.....
" tibia.....	1	1	.....	.....	1	.....	1	.....
Hemorrhoids.....	12	2	10	.....	.....	.....	12	.....
Fistula in ano.....	6	1	4	.....	.....	.....	5	1
Abscess.....	1	18	15	.....	.....	.....	15	4
" perineal.....	2	2	2	.....	.....	.....	2	.....
" palmar.....	1	1	1	.....	.....	.....	1	.....
" cervical.....	2	2	2	.....	.....	.....	2	.....
" axillary.....	2	2	2	.....	.....	.....	2	.....
" labial.....	1	1	1	.....	.....	.....	1	.....
" alveola.....	22	22	22	.....	.....	.....	22	.....
Varicose ulcers.....	1	5	2	4	.....	.....	6	.....
Ulcers.....	1	25	18	4	.....	.....	22	4

DISEASES TREATED, ETC. — *Concluded.*

DISEASES.	In Hospital Feb. 1, 1897.	Admitted.	DISCHARGED.					In Hospital Feb. 1, 1898.
			Well.	Improved.	Unimproved.	Died.	Total.	
Hernia, inguinal		8			6		6	2
“ umbilical		1			1		1	
Furuncle		4	4				4	
Tuberculosis		2	2				2	
Carbuncle		3	3				3	
Felon	1	3	4				4	
Hydrocele		4		4			4	
Cellulitis	1	16	15				15	2
Ingrowing toe-nails	1		1				1	
Synovitis		6	2	4			6	
Carcinoma	1				1		1	
Epistaxis		2	2				2	
DISEASES OF THE EYE.								
Conjunctivitis		30	26	4			30	
Corneal ulcer		1		1			1	
Foreign body in cornea		10	10				10	
Iritis	4	6	6	3			9	1
Blindness		1			1		1	
Trichiasis		2		2			2	
DISEASES OF THE EAR.								
Chronic inflammation (with ear)		3		3			3	
Otorrhœa		11	4	7			11	
Total	100	2,071	1,557	305	160	57	2,079	92

NOTE.—Some cases not admitted to the hospitals are included in this classification, which accounts for the difference in the number of admissions between the above statistics and the preceding tables.

During the past year, 1,647 inmates of the House of Correction were admitted to the hospital and received treatment. Of this number 30 have died. In the observation hospital 283 patients were received. In the nursery 41 children were admitted. There were 6 births, — 2 male and

4 female children. The new wing of the hospital, Ward D, consisting of single rooms, opened Sunday, June 6. December 11, Ward A, the nursery, was gutted by fire. It is now being rebuilt, and we hope to occupy it by April 30. The following improvements have been made during the year: electric light throughout the hospital; the old toilets, bath-tubs, and plumbing torn out and the latest and most approved system of plumbing along with new toilets and bath-tubs substituted in each ward and in the nurse's quarters, and the drainage from the hospital connected with the Metropolitan Sewerage System. Rubber matting has been laid in all the corridors, and a nicely furnished parlor for the nurses has been established.

Dr. Paul Carson and Dr. William H. Greene are still associated with me.

Thanking you for the many courtesies extended me, I am,

Very respectfully,

THOMAS F. ROCHE, M.D.,

Resident Physician.

DEER ISLAND, BOSTON HARBOR, February 1, 1898.

CHAPLAIN'S REPORT.

JAMES R. GERRISH, Esq.,

Superintendent of Deer Island Institutions :

DEAR SIR : I herewith make in brief to you my annual report as Chaplain and Director of Music. My work continues to engage my interest, and I am convinced that the influence of religious instruction and moral effort has a beneficiary effect, though I am hopeful of still larger and better results in reform. May the time soon come when intemperance shall grow less and finally disappear.

Religious services have been regularly held on Sunday, in the morning and in the afternoon. Funeral and baptismal rites have been administered when required and care given the sick and dying. Owing to the increased number of inmates, the attendance at chapel on Sundays has been large. Miss Mary A. Barr and Miss Clara W. Baker are the organists, and are faithful to their posts. The two choirs for the Sunday services are composed of inmates. Miss Baker also plays the organ at Long Island every other Sunday.

The Library Department the past year has undergone extensive improvements in the addition of a commodious room suitably fitted with bookcases capable of containing 7,000 volumes. Already we have on the shelves 5,000 carefully selected and well-bound books for the instruction and entertainment of the inmates, as well as for the use of the officers and matrons. Since November 10, 1897, to date, a period covering a little rising two months, there have been put out 5,117 books. Great credit is due Commissioner E. C. Marshall, who with untiring effort has placed this library on such excellent, permanent basis, and secured such a large number of appropriate books.

Adjoining the library the Commissioner has set apart a room suitably furnished, now designated "Assembly Hall," for the use of the officers and matrons. Here in a social way they spend their evenings, provided with good, current literature. For the reading-matter given by the Hospital Newspaper Society we are very grateful.

With an earnest wish and purpose of the uplifting of those with whom I have to do, I desire, in entering upon the new year with renewed hope, to acknowledge your kindly assistance.

Respectfully yours,

W. B. TOULMIN,

Chaplain and Director of Music.

BOSTON, MASS. January 31, 1898.

COUNTY OF SUFFOLK, HOUSE OF CORRECTION.

SOUTH BOSTON, February 1, 1898.

E. C. MARSHALL, Esq.,

Penal Institutions Commissioner :

DEAR SIR: I have the honor to submit the following report with statistics pertaining to the Suffolk County House of Correction for the year ending January 31, 1898:

In our last annual report was noted the fact that a less number of prisoners were committed 1896-97 than 1895-96 and that the daily average was also less and that "the reduced number enabled us to vacate our barn-like dormitory." I have now to note reductions for this year 1897-98. There was a falling off of 45 committed and 45.43 less in daily average. I wish that all of our penal institutions could report similarly, but I fear they cannot.

During the year a school was opened for instructing the illiterate (see school teacher's report annexed) and calisthenic exercises, as practised in the United States Army, introduced for the benefit of those employed in shops and light work. All of that class of prisoners have each about thirty minutes' exercise, in squads numbering thirty to forty, in the open air, weather permitting, and in stormy or cold weather the exercise is taken in shops. Both innovations are of much benefit, especially the drill at this time, for now all industry is suspended, except work required for the institution.

Chapter 412 Acts of 1897, regulates prison labor so that if any labor is performed or work done for other than public institutions it must be on public account. The act prohibits "contracts or piece price" plans, which plans have been in operation for several years. With money appropriated for that purpose we hope to find something for "idle hands to do" which may be of benefit to the prisoner if not to the County.

Religious services on Sundays, in the chapel, are continued as formerly; Mass is said at eight o'clock A.M., by a priest from the Gate of Heaven parish. This parish also attends to any one wishing Catholic services at any time. Services at one o'clock P.M., are conducted by the chaplain (see his report annexed). Singing by a choir, in place of a quartet, as formerly, and the introduction of congregational singing at the afternoon service are pleasing changes.

A fair amount of garden truck was raised on the place and some fruit; there was slaughtered 19,683 pounds of pork.

See report of Dr. Bancroft, relating to physician's department, annexed.

Please accept my thanks for your kindly aid in the management of the institution so readily given at all times.

Very respectfully,

JOHN C. WHITON,
Master.

VALUE OF LAND AND BUILDINGS AT HOUSE OF CORRECTION, SOUTH BOSTON.

<i>Land.</i>		
Flats, 1,310,710 feet	.	\$13,100 00
Uplands, 631,700 "	.	105,300 00
		\$118,400 00
<i>Buildings.</i>		
Hospital . . .	.	\$10,000 00
Cottage and stable .	.	5,000 00
House of Correction	.	50,000 00
Office and workshops	.	25,000 00
Chapel . . .	.	15,000 00
Sheds . . .	.	1,500 00
Piggery and laundry	.	8,000 00
Gas-house . . .	.	1,000 00
Master's house	.	10,000 00
Stable . . .	.	3,000 00
		128,500 00
Total	.	\$246,900 00

HOUSE OF CORRECTION, SOUTH BOSTON.

Inventory of Property on hand, February 1, 1898.

General care:		
Inmates	.	\$2,791 33
Officers	.	1,782 82
Clothing:		
Males	.	1,476 97
Females	.	339 86
Manufacturing department	.	1,661 31
Hospital department	.	1,016 95
Subsistence:		
Officers	.	101 92
Inmates	.	607 71
Subsidiary	.	602 60
Engineer's department	.	766 24
Repair shop	.	189 21
Laundry department	.	130 88
Agricultural department	.	1,201 87
Store	.	7,965 77
School	.	135 16
Miscellaneous	.	246 92
Total	.	\$21,017 52

STATISTICAL TABLES.

TABLE NO. 1.

Showing Population for the Year ending January 31, 1898.

	Males.	Females.	Total.
Remaining January 31, 1897	496	67	563
Committed by courts.....	607	175	782
Transferred from other institutions...	10	1	11
Returned from escape.....	5	.....	5
Returned from Lunatic Hospital	3	.....	3
Revoked permit by Prison Commissioners	3	.....	3
Total	1,124	243	1,367
Discharged	661	183	844
Remaining January 31, 1898	463	60	523

TABLE NO. 2.

Showing Number of Prisoners Received each Month.

	Males.	Females.	Total.
Remaining January 31, 1897.....	496	67	563
Received in February, 1897.....	31	20	51
“ “ March “	51	20	71
“ “ April “	58	17	75
“ “ May “	34	5	39
“ “ June “	72	42	114
“ “ July “	54	8	62
<i>Carried forward</i>	706	179	975

TABLE NO. 2.—*Concluded.*

	Males.	Females.	Total.
<i>Brought forward</i>	796	179	975
Received in August 1897	39	12	51
“ “ September “	60	12	72
“ “ October “	48	8	56
“ “ November “	59	8	67
“ “ December “	65	19	84
“ “ January, 1898	57	5	62
Totals.....	1,124	243	1,367
Discharged in year ending Jan. 31, 1898.	661	183	844
Remaining January 31, 1898	463	60	523

TABLE NO. 3.

Showing Number of Prisoners Discharged during each Month.

	Males.	Females.	Total.
Discharged during February, 1897....	49	14	63
“ “ March, “	51	17	68
“ “ April, “	74	14	88
“ “ May, “	56	18	74
“ “ June, “	58	24	82
“ “ July, “	60	14	74
“ “ August, “	46	14	60
“ “ September, “	46	13	59
“ “ October, “	76	21	97
“ “ November, “	52	12	64
“ “ December, “	50	13	63
“ “ January, 1898	43	9	52
Total.....	661	183	844

TABLE NO. 4.

Daily Average.

	Males.	Females.	Total.
February, 1897.....	489	76	565
March, ".....	482	73	555
April, ".....	466	80	546
May, ".....	445	74	519
June, ".....	446	82	528
July, ".....	453	82	535
August, ".....	443	77	520
September, ".....	451	76	527
October, ".....	431	66	497
November, ".....	431	61	492
December, ".....	441	59	500
January, 1898.....	467	62	529
Maximum population	492	79	571
Minimum population.....	429	55	484
Daily average	454	72	526

TABLE NO. 5.

Showing how Discharged.

	Males.	Females.	Total.
Expired sentence.....	545	152	697
Fines paid (amounting to \$1,170).....	16	8	24
By order Municipal Court for non-payment of fine, after serving three months	13	12	25
Pardoned by Governor.....	7	.....	7
Pardoned by Commissioner.....	12	2	14
By order of Commissioners of Prisons.	9	.....	9
Transferred to other institutions.....	31	8	39
Transferred to lunatic hospitals.....	11	1	12
Died.....	5	.....	5
Bailed.....	1	.....	1
Escaped	11	.....	11
Total.....	661	183	844

TABLE NO. 6.

Showing Number of Times Committed to this Institution.

	Males.	Females.	Total.
First.....	452	135	587
Second.....	83	20	103
Third.....	30	10	40
Fourth.....	19	4	23
Fifth.....	8	1	9
Sixth	5		5
Seventh.....	1	3	4
Eighth.....	3		3
Ninth	2		2
Tenth.....	1	1	2
Eleventh	1	1	2
Fourteenth.....	1		1
Twenty-ninth	1		1
Total.....	607	175	782

TABLE NO. 7.

Showing from what Courts Committed.

	Males.	Females.	Total.
Municipal Criminal Court	307	140	447
Superior " "	263	30	293
South Boston District Court	26	2	28
Boxbury " "	7		7
Dorchester " "	4		4
Brighton " "		3	3
Total.....	607	175	782

TABLE NO. 8.

Showing Offences for which Committed.

	Males.	Females.	Total.
Larceny	186	36	222
Breaking and entering	75	.....	75
Assault and battery	66	3	69
Drunkenness	41	65	106
Larceny from the person	21	2	23
Idle and disorderly	17	18	35
Lewd and lascivious cohabitation.....	12	2	14
Assault with a knife	10	.....	10
Forgery and uttering.....	10	.....	10
Larceny in a building	10	.....	10
Larceny from conveyance	10	.....	10
Indecent exposure of person.....	10	.....	10
Robbery	9	1	10
Assault upon an officer.....	8	.....	8
Embezzlement	7	1	8
Non-support of wife.....	7	.....	7
Receiving stolen goods	7	.....	7
Assault with a pistol.....	5	.....	5
Attempt to break and enter.....	5	.....	5
Adultery	4	2	6
Being a vagrant.....	7	.....	7
Larceny from common carrier	4	.....	4
Obtaining money or property by false pretences	4	.....	4
Unlawfully exposing and keeping for sale intoxicating liquors.....	4	2	6
Unlawfully selling intoxicating liquors	4	7	11
<i>Carried forward</i>	543	139	682

TABLE NO. 8.—*Continued.*

	Males.	Females.	Total.
<i>Brought forward</i>	543	139	682
Fornication	4	10	14
Polygamy	3	2	5
Keeping and promoting policy lottery..	3	1	4
Being a vagabond	3	.....	3
Assault with a dangerous weapon.....	3	.....	3
Rescuing prisoner from officer.....	3	.....	3
Unnatural and lascivious act.....	3	.....	3
Keeping disorderly house	2	3	5
Assault with intent to rob.....	2	.....	2
Attempt to commit larceny from person	2	.....	2
Aiding and abetting person to vote under a name other than his own ...	2	.....	2
Breaking and entering and larceny from realty.....	2	.....	2
Being present where gaming implements were found.....	2	.....	2
Cheating by false pretences.....	2	.....	2
Escaping from jail or House of Correction	2	.....	2
Indecent assault	2	.....	2
Manslaughter	2	.....	2
Malicious injury to personal property,	2	.....	2
Unlawful appropriation	2	.....	2
Wilfully breaking glass.....	2	.....	2
Assault with intent to murder.....	1	.....	1
Assault with slung shot.....	1	.....	1
Assault with intent to commit rape...	1	.....	1
<i>Carried forward</i>	594	155	749

TABLE NO. 8.—*Concluded.*

	Males.	Females.	Total.
<i>Brought forward</i>	594	155	749
Attempt to commit larceny.....	1	.....	1
Attempt to obtain property by false pretences.....	1	.....	1
Common drunkard.....	1	.....	1
Fraudulently conveying property held under conditional contract of sale..	1	.....	1
Keeping and maintaining common liquor nuisance .....	.....	1	1
Larceny from express wagon.....	1	.....	1
Larceny from realty.....	1	.....	1
Maiming and disfiguring another....	1	.....	1
Open and gross lewdness.....	1	.....	1
Passing worthless note.....	1	.....	1
Perjury.....	1	.....	1
Threatening to commit assault and battery	1	.....	1
Voting under a name other than his own at city election	1	.....	1
Common nightwalker ... ..	.....	17	17
Keeping common nuisance, house of ill-fame .....	.....	2	2
Abandoning an infant child.....	1	.....	1
Total	607	175	782

TABLE NO. 9.

Showing Sentences of Prisoners Committed during the Year.

	Males.	Females.	Total.
Fines.....	47	27	74
Sureties.....	1	.....	1
30 days	3	.....	3
1 month.....	16	2	18
2 months	41	22	63
3 "	66	14	80
4 "	50	37	87
5 "	6	10	16
6 "	126	34	160
8 "	12	3	15
9 "	16	5	21
10 "	11	.....	11
11 "	1	1	2
12 "	68	15	83
14 "	1	.....	1
15 "	14	.....	14
16 "	1	.....	1
18 "	33	2	35
22 "	1	.....	1
24 "	50	1	51
28 "	1	.....	1
30 "	16	.....	16
36 "	24	1	25
48 "	2	1	3
Total	607	175	782

TABLE NO. 10.*Showing Ages of Prisoners Committed.*

	Males.	Females.	Total.
Under 20 years.....	34	4	38
20 to 29 " (inclusive)	320	88	408
30 to 39 " " 	156	49	205
40 to 49 " " 	60	25	85
50 to 59 " " 	28	6	34
60 to 69 " " 	9	3	12
Total	607	175	782

TABLE NO. 11.*Color.*

	Males.	Females.	Total.
White.....	541	159	700
Black	64	16	80
Yellow	2	.....	2
Total.....	607	175	782

TABLE NO. 12.*Social Relations.*

	Males.	Females.	Total.
Married	180	85	265
Single	427	90	517
Total	607	175	782

TABLE NO. 13.

Education.

	Males.	Females.	Total.
Could read and write.....	553	149	702
Could read only.....	2	5	7
Could not read or write.....	48	20	68
Could not read or write, born in Massachusetts	4	1	5
Total.....	607	175	782

TABLE NO. 14.

Nativity.

	Males.	Females.	Total.
Massachusetts	251	57	308
Maine	31	10	41
New York	26	4	30
Virginia.....	11	8	19
New Hampshire	9	7	16
Connecticut.....	12	1	13
Pennsylvania	11	1	12
Rhode Island	9	.....	9
North Carolina	6	1	7
District of Columbia	4	1	5
Maryland.....	4	1	5
Ohio	4	.....	4
Vermont	2	1	3
Florida	2	1	3
Kentucky.....	3	.....	3
Delaware	2	.....	2
<i>Carried forward</i>	387	93	480

TABLE 14.—*Continued.*

	Males.	Females.	Total.
<i>Brought forward</i>	387	93	480
South Carolina.....	2	.....	2
Indiana.....	2	.....	2
Michigan	2	.....	2
Alabama	1	.....	1
New Jersey.....	.....	1	1
Georgia	1	.....	1
Louisiana .....	.....	1	1
Tennessee	1	.....	1
Illinois	1	.....	1
Missouri.....	1	.....	1
Nebraska	1	.....	1
Colorado	1	.....	1
California	1	.....	1
Ireland	75	41	116
Provinces.....	40	17	57
England	23	9	32
Italy	23	.....	23
Scotland.....	9	5	14
Canada	8	4	12
West Indies.....	5	.....	5
Poland	4	.....	4
Cape Breton.....	.....	3	3
Russia.....	2	.....	2
Norway	2	.....	2
Sweden	2	.....	2
China	2	.....	2
<i>Carried forward</i>	596	174	770

TABLE NO. 14.—*Concluded.*

	Males.	Females.	Total.
<i>Brought forward</i>	596	174	770
Spain		1	1
France	1		1
Western Islands	1		1
Finland	1		1
Germany	1		1
Denmark	1		1
Africa	1		1
Arabia	1		1
Armenia	1		1
Austria	1		1
Turkey	1		1
At sea	1		1
Total	607	175	782
Born in United States	401	95	496
“ “ Foreign countries	206	80	286
Total	607	175	782

TABLE NO. 15.

Showing Industrial Relation.

	Males.	Females.	Total.
Actor	1	1	2
Agent	2		2
Artificial flower designer		1	1
Baker	9		9
<i>Carried forward</i>	12	2	14

TABLE NO. 15.—*Continued.*

	Males.	Females.	Total.
<i>Brought forward</i>	12	2	14
Balloon ascensionist		1	1
Barber	9		9
Bartender	5		5
Bell-boy	2		2
Bill-poster	1		1
Blacksmith	3		3
Blacksmith's helper	2		2
Boarding-house keeper	1		1
Boiler-maker	3		3
Bookbinder	1		1
Book-keeper	9		9
Brakeman	3		3
Brassfinisher	6		6
Brassmoulder	1		1
Brassworker	2		2
Broker	2		2
Butcher	3		3
Cab driver	1		1
Candy-maker	1		1
Canvasser	1		1
Carpenter	23		23
Carpet-layer	1		1
Carpet-maker	1		1
Carriage-painter	1		1
Carriage-washer	1		1
Cattle-boat	1		1
Cigar-maker	3		3
<i>Carried forward</i>	99	3	102

TABLE NO. 15.—*Continued.*

	Males.	Females.	Total.
<i>Brought forward</i>	99	3	102
Clerk	15	.....	15
Coast pilot.....	1	.....	1
Compositor	1	.....	1
Conductor, R.R.	1	.....	1
Contractor	2	.....	2
Cook	19	8	27
Coremaker.....	1	.....	1
Currier	2	.....	2
Dentist	1	.....	1
Draughtsman	1	.....	1
Dressmaker .....	.....	1	1
Druggist.....	2	.....	2
Druggist's clerk.....	1	.....	1
Electrotyper	1	.....	1
Engineer	3	.....	3
Engraver	2	.....	2
Fakir	1	.....	1
Farmer	6	.....	6
Fireman	16	.....	16
Fireworks-maker.....	1	.....	1
Fisherman	2	.....	2
Foreman.....	2	.....	2
Gardener	4	.....	4
Gas-fitter.....	1	.....	1
Gas-fitter's helper....	1	.....	1
Gaugemaker	1	.....	1
<i>Carried forward</i>	187	12	199

TABLE NO. 15.—*Continued.*

	Males.	Females.	Total.
<i>Brought forward</i>	187	12	199
Grocer	1	.....	1
Harness-maker	1	.....	1
Heel-trimmer	1	.....	1
Hod-carrier	2	.....	2
Horse-driver	1	.....	1
Horseshoer	2	.....	2
Hostler	21	.....	21
Housework .....	.....	137	137
Ironworker	1	.....	1
Janitor	1	.....	1
Jockey	2	.....	2
Knitting-machine fixer	1	.....	1
Laborer	112	.....	112
Laundry	2	3	5
Lawyer	1	.....	1
Lineman	3	.....	3
Lithographer	1	.....	1
Longshoreman	1	.....	1
Machinist	8	.....	8
Marble-cutter	1	.....	1
Marble-polisher	1	.....	1
Mason	8	.....	8
Mattress-maker	1	.....	1
Messenger	1	.....	1
Newsboy	1	.....	1
Nurse	1	4	5
<i>Carried forward</i>	363	156	519

TABLE NO. 15.—*Continued.*

	Males.	Females.	Total.
<i>Brought forward</i>	363	156	519
Oyster-opener.....	1	.....	1
Painter.	14	.....	14
Paper-box maker.....	1	1	2
Paper-hanger.....	2	.....	2
Pedler	11	.....	11
Piano-polisher	1	.....	1
Plasterer.....	3	.....	3
Plumber.....	8	.....	8
Plumber's helper.....	2	.....	2
Porter	3	.....	3
Pressfeeder	1	.....	1
Pressman.....	3	.....	3
Printer	18	.....	18
Rigger.....	2	.....	2
Roofer.....	3	.....	3
Rubber-worker	1	1	2
Sailmaker.....	1	.....	1
Sailor	17	.....	17
Salesman	12	.....	12
Seamstress .....	.....	2	2
Shank-cutter.....	1	.....	1
Shirt-maker.....	.....	1	1
Shoe-buffer.....	1	.....	1
Shoe-cementer.....	1	.....	1
Shoe-cutter	1	.....	1
Shoe-laster.....	5	.....	5
<i>Carried forward</i>	476	161	637

TABLE NO. 15.—*Concluded.*

	Males.	Females.	Total.
<i>Brought forward</i>	476	161	637
Shoemaker	9	.....	9
Shoeshop .....	.....	2	2
Shoestitcher	1	.....	1
Stenographer	1	.....	1
Steamfitter	7	.....	7
Steamfitter's helper	3	.....	3
Stonecutter	2	.....	2
Suit-maker	1	.....	1
Tailor	4	2	6
Teamster	59	.....	59
Telegraph operator	2	.....	2
Theatrical man	1	.....	1
Tinsmith	2	.....	2
Trader	1	.....	1
Undertaker	1	.....	1
Undertaker's assistant	1	.....	1
Upholsterer	2	.....	2
Veterinary surgeon	1	.....	1
Waiter	29	9	38
Weaver.....	1	1	2
Wheelwright	1	.....	1
Wire-weaver.....	1	.....	1
Wood-worker.....	1	.....	1
Total.....	607	175	782

RULES AND REGULATIONS.

THE officers of a House of Correction shall be a master, deputy master, receiving officer, clerk, physician, chaplain, and such number of male and female assistants as the Commissioner may, with the approval of the Mayor, from time to time deem necessary.

Master.

The Master of a House of Correction, subject to the orders of the Commissioner, shall have the control and management of all who are employed at the institution, under his charge. He shall have the entire management and control of the convicts, subject to the laws defining the powers and duties of masters of houses of correction, and such directions, not inconsistent therewith or with the ordinances of the city, as he may receive from the Commissioner. He shall reside at the institution in apartments assigned him.

It shall be his duty to see that the police and other regulations for the management of the institution and the employment of the inmates, and all orders of the Commissioner, are duly enforced, and that the subordinate officers and others employed faithfully discharge their duties.

He shall examine all persons committed to the institution, noting on the mittimus such facts as are important.

He shall have a code of rules for conducting the institution, to be approved by the Commissioner, and such parts as relate to the prisoners shall be read to them in the chapel on the first Sunday in every month. He "shall appoint all subordinate assistants, employees, and officers for whom he shall be responsible," and at once report the same to the Commissioner.

He shall enforce obedience on the part of the inmates to the rules prescribed for them, and shall have power at his discretion to punish according to law all wilful infractions, such punishments and the cause thereof to be reported to the Commissioner on the next daily report after the occurrence.

It shall be his duty to have all prisoners while in solitary confinement visited by the physician once in each day during such confinement.

He shall see that the provisions furnished to the inmates are of good quality and in sufficient quantity, and that no

waste is allowed, and also that every part of the premises is kept clean, and that the several apartments are properly warmed and ventilated, and that such of the inmates as are able to labor are constantly employed. In case any prisoner going out may require clothing he shall make report thereof to the Commissioner at least one week before his discharge, so that he may be suitably provided with the same; and, should pecuniary aid be thought proper in any case the Master may grant it to an amount not exceeding five dollars.

He shall cause regular books to be kept, showing the quality and amount of articles received at the institution for the supply of the same, and also of the money received for the sales of produce or otherwise, which books shall at all times be open to the examination of the Commissioner or his deputy.

He shall make requisitions on the Commissioner for all articles needed, and receipt at once for all articles received, according to forms prescribed, and shall also certify the bills of such articles.

He shall keep a register of all inmates admitted or discharged, embracing the term of sentence and the offence for which committed, and make daily and weekly reports, according to forms prescribed, giving the names of all persons admitted or discharged, the offence for which committed and the term of sentence, the births and deaths, the physician's report of the sick, the punishments and the causes thereof, and such other information as is worthy of remark. Upon the weekly report he shall also give a statement of the employment of the inmates.

He shall annually, on the first of February, submit a report of the condition of the institution, and number of inmates, giving the number of admissions thereto and discharges therefrom, the births, deaths, and number of inmates therein during the year, with such information and suggestions as he may deem important, or the Commissioner may require.

Deputy Master.

During the absence of the Master, or his sickness or other disability, the charge of the institution shall devolve upon the deputy, and he shall be responsible for its good order and the preservation of its discipline, and shall not absent himself from the prison without permission of the Master.

He shall, subject to the directions of the Master, have a general and superintending care of the prison, especially its

police and discipline, and see that all the rules and regulations, and orders of the Master are strictly observed. He shall be constantly about the establishment, visiting frequently all departments of the prison; and shall, if possible, be present at the opening and closing of the prison, and also attend in the chapel during the performance of religious services.

On the reception of convicts he shall cause to be read and explained to them such extracts from the rules of the prison as may be necessary to enable them to understand their duty and the discipline to which they are to be subjected. He shall assign them their cells, and shall station them in the department of labor directed by the Master.

He shall enforce obedience to the officers on the part of the convicts, and report to the Master all violations of discipline, or rectify them in a prompt and decisive manner. When he feels the least doubt as to the proper course to be pursued, he shall, if possible, not act without consultation with the Master.

In deciding on the propriety and extent of punishment necessary to be inflicted during the absence of the Master, he shall be governed by previous examples, always keeping within the limits of a sound discretion and the laws of the Commonwealth, making due allowance for possible ignorance of duty, or of mental weakness, on the part of the convict, and ever exercising a just degree of lenity, without shrinking from the prompt and efficient discharge of his duty.

He shall present to the Master, on the morning of every day, a report closed at 7 o'clock of the previous day, stating therein all cases of punishment, and the occasion of them, the number in solitary confinement, the names, duty and stations of the officers composing the night guard, together with an account of any important occurrences that may have taken place within the institution during the preceding twenty-four hours.

He shall give notice on the bulletin board, every Saturday afternoon, of the time the first bell will ring in the mornings of the ensuing week, as fixed by the Master. He shall not grant leave of absence to any officer without consulting the Master. He shall not be absent at the same time as the Master, except in case of great emergency.

Receiving Officer.

The Receiving Officer shall receive all convicts on their admission, conduct the females to the proper matron of the female department, and examine all males at the receiving-

room, where he shall cause them to be stripped and thoroughly cleansed. Their beard and whiskers shall be shaven off, and their hair cut, if necessary.

He shall make an entry, in a book kept for the purpose, of the clothing and all articles belonging to the inmates, and shall have such property as is worth preserving properly cared for, and shall restore the same to them when they are properly discharged.

He shall assist the Deputy Master in the performance of his duties, and shall discharge convicts on the expiration of their sentence according to a list that will be furnished to him monthly.

He shall distribute rations to those in solitary confinement, and shall perform such other duties as may be required of him.

In the absence of the Master and Deputy Master, or their sickness or disability to act, he shall have charge of the institution.

Clerk.

The Clerk shall keep the books of the institution, conformably to the laws and such plans as may be adopted by the Commissioner. He shall keep a distinct account with each department of the prison, so as readily to know the result of their operations, attend to the subsidiary books of the different departments, make up the daily and weekly reports, and perform all necessary writing for the prison.

He shall give constant attention to the interests of the institution and the duties of his office, and perform such other duties as may be required of him.

Physician.

It shall be the duty of the Physician to visit the institution once a day, and as much oftener as may be necessary, and to examine carefully into every case of sickness or inability to labor, and prescribe such medicines and course of diet or treatment as he may deem proper, and notify the Master of all convalescents able to perform labor. He shall from time to time furnish the Master a list of such medicines as may be needed for the dispensary, and report to him any neglect or improper conduct on the part of the nurses or those in attendance that may come to his knowledge.

The sustenance and diet of those in the hospitals shall be regulated by him, through requisitions therefor upon the Master, which must be in writing, and given daily.

He shall keep a record of patients in the hospitals, designating the time of admission thereto, with the nature of the disease and the treatment, and the date of discharge or death, and shall make a daily report in writing, to the Master, of each person in the hospital, and their condition. No critical surgical operation shall be performed, except in cases of urgent necessity, without the sanction of the Commissioner.

Chaplain.

It shall be the duty of the Chaplain to perform divine service on the Sabbath, and at such other times as may be set apart by the Commissioner for religious exercises, to visit the sick, instruct the inmates in their moral and religious duties, counsel and advise with them prior to their discharge, and perform such other duty in his capacity as the Commissioner or the Master may require. He shall not be allowed to exchange or supply any substitute without the consent of the Commissioner or of the Master.

GENERAL INSTRUCTIONS FOR THE OFFICERS AND MATRONS.

All orders to the convicts should be given with the utmost possible distinctness, so as to be clearly understood. Every officer immediately engaged in the government of the inmates must notice and report to the Master or Deputy Master all cases of violation of the rules that may fall under his observation. Should a convict refuse or hesitate to obey the orders of an officer, he shall be admonished and informed of the consequences of disobedience; if he still persists, the officer shall send for the Master or Deputy Master, or, if they are absent, the Receiving Officer, or shall take such measures as the emergency may require to enforce obedience for the time being, and report the same to the Master or Deputy Master as soon as it is possible so to do.

No officer shall be allowed to inflict corporal punishment or otherwise maltreat any convict, nor shall any punishment be allowed except by authority of the Master or Deputy Master; but in case of a rebellion, or insubordination, the officer in charge shall use his own discretion, with such means as he may have at command to quell it.

No officer or matron, in any case, shall use insulting or irritating language towards the convicts. If there is any talking or noise in the shops or prison, the officer hearing the same must ascertain where it is made, and see that the noise or disturbance ceases. At night the outside doors of the prison shall be locked as soon as the convicts are in their cells, and particular care shall be taken of the keys until they are delivered to the Master or Deputy Master. The male prison cells must not be unlocked during the night-time, unless ordered by the Master or his deputy, nor in the morning without three officers being present. The officers are reminded that they must not talk with each other, with visitors, or with agents or superintendents, in the hearing of the convicts. On all occasions as little conversation shall be permitted in the prison while the convicts are there as the duty required will admit of, and that in a low tone of voice; common conversation with the convicts is inconsistent with the dignity of an officer, and is not allowed.

The officers and matrons are required to see that the public property is not wasted or misapplied, and that all complaints by the convicts to the officers respecting food, clothing or ill-treatment, are communicated to the Master or Deputy Master without delay.

GENERAL REGULATIONS.

The convicts, while in their cells, shall preserve perfect silence, except in cases of illness, when they may speak to the officer in charge.

On Sundays the prisoners shall be conducted to the chapel, at the times of public worship, and seated in such manner as the Master may direct. During the times when they are moving to and from the chapel, or to and from the workshops, entire silence and the most perfect order and decorum shall be maintained.

The convicts shall have clean underclothing as often as once a week, and as much oftener as the Master shall direct. No spirituous liquors or tobacco shall be furnished to any prisoner except by order of the Physician. No trafficking shall be allowed between the officers and convicts, nor shall any officer be allowed to receive any perquisite, in any shape, in addition to the compensation allowed him by the Commissioner. Trafficking among the convicts is prohibited, and they shall not be allowed to receive anything from without the premises, or hold any intercourse with persons outside, without express permission of the Commissioner or the Master.

When visitors are present no convict shall be allowed to address them, without permission, except in answer to such questions as may be asked by persons officially authorized to ask for information.

DUTIES OF OFFICERS OF THE HOUSE OF CORRECTION.

1. The officers are the agents of the Master in enforcing the discipline of the institution, and in carrying into effect the laws for the government thereof.

2. They shall supply themselves with uniform and equipment such as shall be prescribed by the Master, which shall be worn while on duty, unless otherwise directed by the Master; and they shall strictly observe the utmost cleanliness in dress, person and habits.

3. While about the prison the officers shall refrain from boisterous conversation, exciting discussions of any kind, and all other acts which would tend to disturb the good order of the institution.

4. In their intercourse the officers are at all times to treat each other with that mutual respect that becomes gentlemen and friends, and they are required to avoid all discussions that are liable to cause annoyance or hard feeling, and are strictly forbidden to treat each other with disrespect or to use any ungentlemanly epithets.

5. They shall not, while on duty, hold conversation with each other, except such as shall be necessary in the performance of their duties.

6. They shall not be engaged, while on duty, in reading or writing other than in making necessary entries, or in any employment which will interfere with constant care and vigilance.

7. They shall not under any circumstances allow prisoners to speak to them upon any subject not immediately connected with their duties, employments or wants.

8. They shall keep prisoners under their charge diligently employed.

9. They shall require the greatest possible cleanliness in the persons and clothing of prisoners, and in their working and sleeping apartments.

10. They shall instruct the prisoners in all the rules of the institution necessary for their government, when requested, and admonish them on the least appearance of insubordination.

11. In their intercourse with prisoners they shall be careful to maintain a quiet demeanor under any provocation,

and shall not punish a prisoner or strike him except in self-defence, to prevent escape, or to quell an insurrection; nor shall they use any profane or indecorous language to prisoners or in their presence.

12. Whenever a prisoner is guilty of any infraction of prison disciplinary rules the officer shall forthwith report the fact to the Deputy Master, stating the nature of the offence.

13. Discipline is the first and highest consideration in a prison, and must be maintained at all hazards, but the officer who maintains it with the lowest number of punishments deserves the highest commendation.

14. No officer shall receive from or deliver to a prisoner any article or anything whatever without the knowledge or consent of the Master or Deputy.

15. Intemperance will not be tolerated among employees, neither will they be allowed to keep or use intoxicating drinks in or about the institution. Frequenting saloons or disreputable places by employees will be considered as sufficient cause for their dismissal.

16. Officers are strictly prohibited from smoking while on duty, or in or about the prison, yard, or bath-room before the prisoners are locked up at night, excepting in such places as are designated by the Master.

17. Officers are expected to give their entire time to the institution, and are not to leave their places of duty without the consent of the Master or his Deputy, and any officer who absents himself without leave will be considered as having resigned. Leave of absence will not be granted to any officer on Sundays or holidays.

18. All employees are prohibited from discussing while on duty the manner in which any officer or employee performs his work, and from making any remarks which might tend to reflect upon the character or management of such officer or employee, and from criticising publicly the acts of any superior officer or the management of the institution.

19. They are also prohibited from discussing in the presence of prisoners matters relating to the discipline or management of this or other similar institutions.

20. Officers are strictly prohibited from talking with prisoners at any time, except as the nature of their business may require, and all familiarity between employees and prisoners is absolutely prohibited.

21. Officers are prohibited from selling to or buying from prisoners, or giving to or receiving from them anything

in the nature of a gift or present, or conveying to or from them any message, either written or verbal.

22. Upon returning from a leave of absence, officers will proceed directly to their rooms, put on their uniforms and report at the office for duty at once. Officers not reporting at expiration of their leave of absence will be dropped from pay-roll.

Officers will be held to a strict accountability for the prisoners under their charge, and will be personally responsible for their safe custody.

An officer shall visit daily every person confined in his cell or in solitary.

The Master will furnish daily to the physician the names of those placed in solitary the preceding day, and the doctor will visit them on the day reported, and put in his daily report a statement as to their condition.

Regulations and Duties of Convicts.

All convicts shall receive a bath for the whole person when being received into the prison, and shall obey such rules as to personal cleanliness and bathing as the Master shall from time to time prescribe.

Prisoners will be informed as to their duties and work in a clear and comprehensive manner and they will be expected to render prompt and exact obedience to the rules.

Prisoners on entering the institution will bathe and will be assigned cells, and will have the rules of the institution for convicts read to them.

Prisoners will be allowed to have in their cells the following articles, and no others: an iron bedstead and bed furnished for use, a Bible, library book, a comb, spoon, knife, fork, pepper and salt containers and vinegar bottle, one bucket, one water can, and a seat. If other articles are found in any cell, not there by permission of the Master, the one in whose cell they are found may be punished.

Convicts are expected to keep their cells neatly, and will be held responsible for their condition, and while in their cells must refrain from all unnecessary noise.

The first duty of the convict is obedience, and it will be for his interest, as it is his duty, to be respectful and obedient to the officers, and conform to the rules and regulations established for his government.

At the ringing of the morning bell he must turn out, dress, wash and comb and arrange his cell. At the signal he will open the door gently to the wall and march as directed.

On entering the workshop the prisoners will go directly to their several places of labor, and commence at once; and must be quiet, industrious and faithful in doing the work assigned them. In shops and other places of labor they are to obey all orders promptly, exhibit no ill-temper when admonished by an officer, have no conversation whatever with other convicts, nor communicate any intelligence in writing or by looks or signs, nor stare at visitors, nor speak to or answer them, nor receive from nor give to them anything whatever without permission from an officer. They must approach their keepers in a respectful manner and be brief in their communications; they are not to speak to them on ordinary topics, nor address them except when it becomes necessary in relation to their work or wants. They must not leave or go out of their places of labor without permission, and when allowed to do so shall go and return directly without unnecessary delay. If one is sick or unable to labor, he will make it known to his officer and act as he may direct. At the signal from the officer, and not before without permission, they will leave their work, wash and take their places in divisions, for marching, as directed by their officers, and each in passing the slide will take the first dish the hand is put upon and be careful not to spill or drop the food.

On entering the cell they must close the doors gently and stand with their hands through the bars until otherwise directed.

Convicts must be cleanly in person, clothing and cell, and must be quiet, orderly and decent in their behavior, and never indulge in profanity, vulgarity, nor be guilty of any kind of indecency whatever; they must not wilfully or carelessly injure their work, tools or wearing apparel, nor mark or any way mar or disfigure their cell, nor injure, mark or misuse any book, dish, or other article whatever allowed in the cells; nor work in their cell without permission of the Master, or bring in or carry out any article from the cells contrary to regulations; nor call the guard except in case of sickness or absolute necessity; nor pass any article or thing to another convict while in prison without permission. At the ringing of the bell at night every convict shall go to bed immediately and observe a profound silence from that time until the ringing of the morning bell.

They shall always march in such order as may be designated by the officer in charge. While in their cells and while marching, and at all other times, all unnecessary noise must be avoided. No convict shall sleep with his clothes on, but

shall lay each article separately, that the guard on duty can see if this rule is complied with.

Before entering the chapel they must remove from their mouths any substance they may have in it; and when in the chapel will take seats as directed by the officers in charge; and while there give strict and silent attention to the services. All disposition to cough as far as possible must be suppressed, and no shuffling with the feet, spitting on the floor, or movement of the body calculated to disturb the order and quiet of the chapel to be indulged in.

Convicts obeying the rules will be allowed to see their relatives, and such of their immediate friends as the Master shall permit.

Interviews of relatives or friends with convicts shall not be oftener than once in four weeks, except for some special reason, and must be in the presence of an officer. At such interviews convicts must sit apart from their visitors and their conversation must be distinct, so that the officer can see or hear whatever is done or said, and he will allow no article to be passed from one to the other, except it goes through his hands. Each convict, if he obeys the rules, will be allowed to write to his friends once a month, all letters to be sent unsealed to the Master's office, with the name the writer is known by signed in full; convicts will write as distinctly as possible, so that their letters can be easily read before mailing; and must never write between or across the lines. No correspondence for publication will be allowed. All letters containing profane, obscene or disrespectful language, false statements, or misrepresentations will not be forwarded, and the writer thereof forfeits the privilege of writing or receiving letters, and may be punished as the Master may direct.

Convicts will be allowed to receive periodicals or magazines from the office of publication, but they will not be allowed to send them out, to be taken away from the prison.

Prisoners are also allowed to receive from friends reasonable quantities of fruit and confectionery, towels, soap, handkerchiefs, hair and tooth brushes, comb and pocket looking-glass.

On being discharged, convicts will not be allowed to take away with them any letters or pamphlets they have received, nor any writing or memorandum they have made while in prison. Any money a convict may have when he enters the prison, or that he may receive afterwards from his friends or other sources, must be placed in the hands of the Master, an

account of which will be kept and will be paid to him on his discharge.

For all violations of the above rules convicts will subject themselves to severe punishment. It is the duty of officers in charge of convicts to see that the rules are promptly observed, as no officer except the Master has authority to suspend them or excuse their violation. Convicts should not forget that in proportion as they conform to these rules will they be likely to receive the "deductions" allowed by statutes of Massachusetts as follows:

Public Statutes of Massachusetts, chapter 222.

SECTION 20. Every officer in charge of a prison or other place of confinement shall keep a record of the conduct of each prisoner in his custody whose term of imprisonment is not less than four months. Every such prisoner whose record of conduct shows that he has faithfully observed all the rules, and has not been subjected to punishment, shall be entitled to a deduction from the term of imprisonment, to be estimated as follows: Upon a sentence of not less than four months and less than one year, one day for each month; upon a sentence of not less than one year and less than three years, three days for each month; upon a sentence of not less than three years and less than five years, four days for each month; upon a sentence of not less than five years and less than ten years, five days for each month; upon a sentence of ten years or more, six days for each month. When a prisoner has two or more sentences, the aggregate of his several sentences shall be the basis upon which the deduction shall be estimated. Each prisoner who is entitled to a deduction from the term of his imprisonment, as aforesaid, shall receive a written permit to be at liberty during the time thus deducted, upon such terms as the board granting the same shall fix. Said permits shall be issued as follows: To prisoners in the jail or houses of correction of Suffolk County, by the Penal Institutions Commissioner; to prisoners in other jails and houses of correction, by the county commissioners of the several counties; to prisoners in the state prison and in the reformatory prison for women, by the Commissioners of Prisons; to prisoners in the state workhouse, by the trustees of said workhouse. The board issuing a permit, as aforesaid, may at any time revoke the same, and shall revoke it when it comes to their knowledge that the person to whom it was granted has been convicted of any offence punishable by imprisonment.

A convict attempting to escape is hereby notified that such an attempt renders him liable to the penalties of section 50 of chapter 220 of the Public Statutes.

SECTION 50. Whoever lawfully imprisoned in any place of confinement established by law, other than the state prison and state

workhouse, breaks therefrom and escapes, or forcibly breaks the same with intent to escape, or by force or violence attempts to escape therefrom, shall be punished by imprisonment in the state prison not exceeding five years, or in the jail or house of correction not exceeding three years, or by fine not exceeding one thousand dollars.

Any convict who desires will have materials furnished him to write to the Governor, the Mayor, the Board of Prison Commissioners, or the Penal Institutions Commissioner, and any desiring to interview the Commissioner will notify the Master, who will so inform the office in his weekly report.

BOSTON, January 31, 1898.

TO COL. JOHN C. WHITON,

Master of the House of Correction:

SIR: I have the honor to submit the following report of the Medical Department of this institution for the year ending January 31, 1898:

Patients remaining in hospital February 1, 1897 . . .	15
Number admitted since	230
Total number treated in hospital February 1, 1897, to January 31, 1898, inclusive	245
Number discharged	224
“ died	5
Remaining in hospital January 31, 1898	16

The following list gives the names of the diseases and the number of times patients have been treated in the hospital:

MEDICAL.

Alcoholism	15	Melancholia	1
Acne	1	Menorrhagia	2
Asthma	2	Neuralgia	2
Cancer	1	Edema of lung	1
Cystitis	5	Observation	3
Diarrhoea	11	Opium habit	1
Dyspepsia	3	Parotitis	1
Eczema	1	Pericarditis	1
Erysipelas	2	Pleurisy with effusion	5
Febricula	2	Rheumatism	9
Gastritis	2	Sciatica	1
Heart disease, valvular	3	Syphilis	4
“ “ irritable	1	Tapeworm	3
Hemorrhage, pulmonary, ...	3	Tonsillitis	12
Influenza	8	Tuberculosis of glands	2
Insane	12	“ “ lung	12
Lumbar palsy	1		
Malaria	11	Total	165
Malingeringer	21		

SURGICAL.

Abscess	10	Iritis	4
Adinitis	1	Lumbago	1
Anchylosis	1	Orchitis	8
Boil	5	Otitis	1
Bubo	1	Paraphimosis	3
Caries of teeth	4	Piles	4
Chancroid	1	Stricture of urethra	1
Fistula	3	Ulcer	8
Felon	2	Wounds	2
Fracture	3		
Gonorrhœa	1	Total	65
Hernia	1		

Five men have died during the year, of the following-named diseases: Pericarditis, œdema of the lung, pulmonary tuberculosis, typhoid fever and valvular disease of the heart.

Eleven men and one woman have been transferred to hospitals for the insane.

I wish to express my hearty appreciation of the introduction of calisthenic exercise into this prison.

Respectfully,

W. B. BANCROFT,

Physician.

CHAPLAIN'S REPORT.

SOUTH BOSTON, February 1, 1898.

COL. JOHN C. WHITON,

Master of the House of Correction :

SIR: As chaplain and librarian of this institution it is my duty and privilege to submit the following report for the year ending January 31, 1898 :

STATISTICS.

The following is an abbreviated statement of donations made to the library during the past twelve months :

	Volumes.
Inmates' donation	563
By the Hospital Newspaper Society	748
By the Christian Herald Co.	205
By J. C. Ingraham	48
By Mrs. John C. Whiton	25
By the Catholic World Co.; one year's subscription.	
By Patrick Donahoe's Magazine Co.	8
By special appropriation	74
Periodicals sent to inmates	1,362
Anonymous	39

In addition to the above we have received one hundred prayer books (Protestant Episcopal) from the Margaret Coffin Prayer Book Society of the Diocese of Massachusetts for free distribution among the inmates; thirty-nine copies of church music, for the use of the choir, from a friend; and several religious books which were sent by Mrs. Spooner which were placed in the hospital to administer comfort to the sick. We also wish to acknowledge the gift of hymn cards from the Massachusetts Prison League, and the appropriation by the Commissioner by which we have been enabled to purchase volumes from time to time to take the place of those which were worn out by constant use. There was a large package of magazines sent to the chaplain's residence, but many of the books were such that we could not safely bind them and put them into the hands of the inmates on account of the peculiar character of the illustrations, etc.

The chaplain feels very grateful that the New Testament with Psalms has taken the place of the small, finely-printed Bible. Much might be said in favor of the change, but I

refrain from saying anything more than this that, the Old Testament contains a great deal of matter that should be left to the scholar and divinity student for devout consideration and given to the lay-mind with careful explanation; then again, the complete Bible when printed in small type and convenient size for private reading is so small a book that the reader finds his eyesight severely taxed in the perusal of it.

I cannot speak too highly of our present library system with its catalogue (printed a year ago) and distribution cards and all that go to make up a satisfactory prison library, and to thank the Commissioner, the Master and Deputy Master for the part they have taken in making it an assured success.

CHAPEL SERVICES.

Sunday services have been held without interruption at the usual hour, 1.15 P.M., and have been very generally attended. The clergymen and others who have visited us have shown a great interest in our religious work and encouraged us greatly by their words of counsel and comfort. Private services have been held when occasion required, the sick visited, and those about to be discharged counseled and advised. The burial service has been read over the unclaimed bodies of two (2) of the inmates during the past year at which services inmates were present who had any acquaintance with those whose souls had passed away. The chaplain wishes to express personal gratitude to the officials who have by courteous and kindly helpfulness made the prosecution of his duties a privilege and pleasure, and a comfort to those under his pastoral care.

Respectfully submitted,

S. STANLEY SEARING,

Chaplain.

TEACHER'S REPORT.

SOUTH BOSTON, January 31, 1898.

COL. JOHN C. WHITON,

Master of the House of Correction :

SIR: I herewith respectfully submit to you the first report of the school of this institution.

The room chosen for the school is in one of the rear buildings of the establishment over what is known as the block-shop. It is large, airy and well lighted. Windows on three sides of it look out upon the city and the harbor. This room was used at one time as a dormitory, but at the cost of some trouble and pains to the Master of the House of Correction it is now an inviting schoolroom. On the first of last April it was ready for use, and was thrown open to the pupils.

The school thus opened was intended especially for the illiterates. A glance at the annual reports of the Master of the House of Correction shows that a large number of persons who cannot read or write are yearly received at this institution. According to the report for the year 1895, of the total number committed to the institution in the course of that year there were 127 persons who could neither read nor write, and twenty others who were able to read, but were not able to write. In like manner, the reports from year to year give a larger or a smaller number. To provide for the special needs of this class of prisoners, and to make it possible for them to become more intelligent and better citizens, has led to the important step of organizing the school in this institution. In accord with this aim and purpose the school has devoted itself during the past ten months almost exclusively to the interests of this class of men.

From the first of last April to the date of the present report 112 men have received instruction in the school. There was not, however, so large a number as this going to school at any one time. In the number of its pupils, as in all other respects, the school is the result of a gradual development. On the first of April a beginning was made with twenty pupils. By the first of June, the attendance had increased to forty-six. Sixty-four were in the school by the first of August. At present there are seventy-six pupils, and

preparations are being made to accommodate a much larger number. The remaining thirty-six men have left the school in the course of the past ten months, as their term of imprisonment expired within that time. Most of these men have had the advantage of five or six months' drill in reading, writing and arithmetic and had made considerable progress in these branches before leaving.

The 112 men as a body had received very little in the way of education prior to their entering the school. From one cause or another, they had had little time or opportunity for schooling. Indeed many of them had never been at school. A large percentage of them are poor laboring men who were forced to leave school at an early age, in order to earn a livelihood.

The entrance examination showed that of the 112 men who attended the school, there were forty-six illiterates. These had not the least idea of reading, writing and arithmetic. They were ignorant even of the most elementary principles of these branches. This is not surprising as an inquiry in each particular case brought out the fact that thirty-nine of these men had never gone to school. Forty-two of the remaining sixty-four had been to one school or another, but generally for a very short term. None of these men had passed the Primary grade. In all, only twenty-three men had reached the grammar grade. Some had spent two and others three years in the Grammar school. But not one of these men was a Grammar school graduate.

The increase in the number of pupils and their progress in the studies have gradually brought about the formation of classes and sections in the new school.

During the month of April and a part of May, the pupils were few in number, and most of them belonged to the same grade. Under these conditions, it was found practicable to unite them all into one class. This class, made up mostly of illiterates, was called the First Primary. Later, the Second Primary class was formed. The more advanced pupils of the First Primary were promoted to the Second Primary, and their number was further increased by others entering the school. Recently, both classes have been subdivided into two sections, making in all four sections. This was necessary in order to meet the growing divergence in the standing of the pupils of the two classes. Section A of the First Primary contains the illiterates who have entered the school within the past two or three months. The pupils in First Primary, Section B, have gone beyond the elements of reading, writing and arithmetic. They can read the Second

Reader with ease, and find no difficulty with the fundamental processes in arithmetic.

In Section C of the Second Primary, the pupils, besides having the regular reading and spelling lessons, are introduced to the formal study of grammar and geography. If the men in these three sections were divided into three classes they would make three well-graded Primary classes, this would complete the Primary school. In Section D, there are fifteen bright, interested men who have had considerable success in their studies, these might be made the nucleus of a Grammar class.

The school is in session four hours a day, two hours in the morning and two hours in the afternoon. The morning hours are from 9 to 11 o'clock; the afternoon hours are from 2 to 4 o'clock. School is held six days of the week.

The following is an outline of the studies assigned to different sections:

First Primary,	{	Section A,	{	First Reader.
			{	Spelling.
			{	Writing.
			{	Language.
		Section B,	{	Second Reader.
			{	Spelling.
			{	Writing.
			{	Language.
			{	Numbers.
Second Primary,	{	Section C,	{	Third Reader.
			{	Arithmetic.
			{	Writing.
			{	Spelling.
			{	Language.
			{	Geography.
		Section D,	{	Fourth Reader.
			{	Arithmetic.
			{	Grammar.
			{	Geography.
			{	Spelling.
			{	Writing.
			{	Supplementary Reading, from
			{	United States History.

Respectfully submitted,

JOHN A. ELLIOTT,

Teacher.



ANNUAL REPORT
OF THE
PRINTING DEPARTMENT
FOR THE YEAR 1897.

OFFICE OF THE SUPERINTENDENT OF PRINTING,
BOSTON, MASS., June 1, 1898.

HON. JOSIAH QUINCY,

Mayor of the City of Boston:

SIR: In compliance with the requirements of chapter 3, section 22, of the Revised Ordinances of 1892, and the order of the City Council of January 6, 1898, I present the following report of the acts and doings and receipts and expenditures of the Printing Department for the financial year commencing February 1, 1897, and ending January 31, 1898.

In submitting the first annual report of this department, it may not be deemed inappropriate to refer briefly to the circumstances attending its inauguration as well as to the conditions which have prevailed in its management, inasmuch as in the undertaking of this enterprise the city of Boston has been the pioneer in this field of municipal ownership and operation, and a wide-spread interest has been manifested in the success or failure of the experiment.

For many years the substitution of the principle of municipal ownership and control for the contract system on public work has been strongly advocated by many thoughtful students of municipal government, and especially by members

of organized labor. The notable success of various experiments abroad in this direction, more particularly in Great Britain, seemed to warrant the conclusion that the germ of great possibilities is contained in the principle of direct employment by municipalities.

The primary agitation for the establishment of the Municipal Printing Plant of Boston must be accredited to the membership of Typographical Union, No. 13, of this city. The policy of the present administration in giving recognition to union labor and union principles made it possible for the plans of the union to be carried into practical effect, notwithstanding the arrayed antagonism of those having interests in opposition.

The operation of the Plant by the city dates from March 1, 1897. The total pay-roll for the eleven months amounts to \$62,992.83; the total business done for the eleven months to \$122,265.52; the total operating expenses to \$110,058.12. Allowing for depreciation of the Plant, at the rate of 10 per cent. per annum, this department is able to report a net gain, during the period covered by the report, of \$8,004.30 as against the old system of contract work.

Of at least an equal importance with this considerable financial gain must be considered the conditions under which this money has been expended, and the results obtained. Union conditions have been rigidly adhered to in the administration of the Plant. A high grade of competency has been insisted upon among the employees, and this has made possible the high grade of work produced, which will at least not suffer by comparison with that turned out under the contract system.

In the matter of hours and wages the employees have been the beneficiaries of the union policy adopted, and a contented force of workmen is not the least pleasing result of this policy.

The binding, ruling and electrotyping of the department, for which the Plant does not possess facilities, is done by private houses.

I herewith submit the report of the examination by the expert committee, constituted at your request by the Merchants' Municipal Committee, on the financial results for the first six months of the operation of the Plant, which is worthy the careful attention of those interested in the subject, as it is based upon an exhaustive inquiry of a committee, whose qualifications for the work must be conceded by all, as they are gentlemen of high standing in the community, and of unbiassed judgment.

I also submit a report for the eleven months, from March 1, 1897, to January 31, 1898, by the expert accountant who was selected to make the examination for the first six months.

When the difficulties attending the inauguration of an enterprise of the nature of the Plant are taken into account, together with the opposition with which it has had to contend, it may fairly be claimed that the results of its first year of operation are of such a character as to afford ample satisfaction to those who have stood as its sponsors.

It must be particularly pleasing to the Chief Executive of this city, as it is an assurance to the citizens of Boston that the financial calculations upon which he took the responsibility of recommending the establishment of a Municipal Printing Plant have been fully justified by the results of its operation thus far.

Especially should it be gratifying to the branches of the International Typographical Union, for its success has fairly demonstrated that the claim of union printers is well founded that Municipal Printing Plants, administered upon a business basis, will compare favorably with the contract system of public work.

FINANCIAL STATEMENT.

The following is a statement of the appropriation and revenue received from printing, rents, power, heating, etc.; also expenditures, paid up to January 31, 1898:

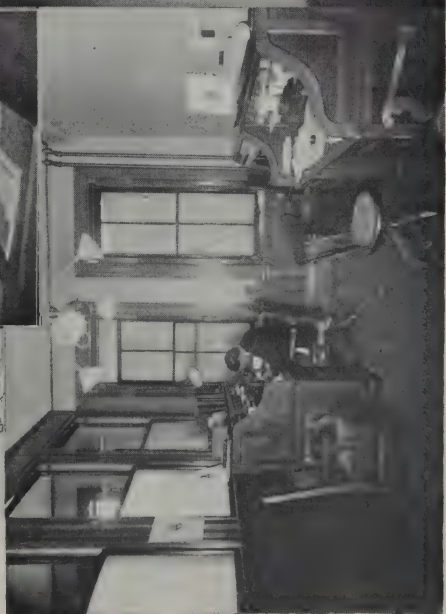
CREDITS OF PRINTING DEPARTMENT FROM FEBRUARY 1,
1897, TO JANUARY 31, 1898.

Transfer from preceding year	\$40,000 00
Appropriation	28,800 00

Printing done at plant, as follows:

Assessing Department	\$10,954 82
Auditing Department	169 26
Building Department	1,275 05
Inspection Department	22 08
Board of Appeals	8 71
Collecting Department	1,078 60
City Clerk Department	182 67
City Messenger Department	256 27
Clerk of Committees Department, ...	119 50
City Council, Incidental Expenses, ...	5,135 00
City Council Proceedings	554 09
Cemetery Department	192 90
Mount Hope Cemetery	97 28
Charlestown Bridge	34 74
Congress-street Grade Crossing	43 51
Election Department	21,757 55
Engineering Department	227 87
Fire Department	1,062 14
Health Department	3,026 84
Hospital Department	1,634 65
South Department	351 67
Ann White Vose Building	113 56
Institutions:	
Penal Institutions, House of	
Correction, South Boston	131 26
Penal Institutions Department	153 58
Children's Institutions, Parental	
School	26 63

<i>Carried forward</i>	<u>\$48,610 23</u>	<u>\$68,800 00</u>
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VIEWS SHOWING SUPERINTENDENT'S OFFICE AND COUNTING ROOMS.

<i>Brought forward</i> . . .	\$48,610 23	\$68,800 00
<i>Institutions, continued.</i>		
Institutions Office Expenses . . .	53 00	
Institutions, Insane . . .	235 46	
Institutions Department . . .	344 63	
Institutions Registration . . .	16 74	
Almshouse and Hospital, Long Island . . .	80 97	
House of Reformation . . .	18 35	
Marcella-street Home . . .	25 95	
Institution Pauper Expenses . . .	279 22	
Lamp Department . . .	225 07	
Law Department . . .	284 66	
Library Department . . .	656 21	
Market Department . . .	49 23	
• Mayor's Department . . .	356 38	
Municipal Statistics Department . . .	120 04	
Overseeing of the Poor . . .	117 42	
Park Department . . .	798 70	
Public Parks . . .	264 93	
Strandway . . .	50 72	
Police Department . . .	3,076 39	
Police Signal Service . . .	316 94	
Liquor License . . .	452 51	
House of Detention . . .	23 96	
Public Celebrations . . .	726 25	
Public Buildings . . .	176 62	
Schools . . .	52 64	
Ward-rooms . . .	2 42	
Electrical Construction Division, Architect Division . . .	169 34	
Armories . . .	31 01	
Public Grounds . . .	15 90	
Registry Department . . .	32 87	
Randidge Fund Excursion . . .	546 92	
Rapid Transit . . .	38 00	
Soldiers' Relief . . .	14 34	
Stony Brook Improvement . . .	62 32	
Sinking Fund . . .	35 45	
Sealing of Weights and Measures, . . .	2 70	
South Union Station . . .	142 30	
South Union Station, Sewer Division, . . .	132 04	
Street Laying-out Department . . .	62 33	
Street Laying-out and Construction of Highways . . .	49 63	
	201 34	
<i>Carried forward</i> . . .	\$58,952 13	\$68,800 00

<i>Brought forward</i> . . .	\$58,952 13	\$68,800 00
Street Sewerage Works . . .	672 07	
Street Department:		
Central Office . . .	181 40	
Paving Division . . .	5,277 69	
Bridge Division . . .	337 69	
Sanitary Division . . .	1,643 50	
Street Cleaning Division . . .	757 16	
Watering Division . . .	211 12	
Ferry Division . . .	889 59	
Cambridge Bridge . . .	91 34	
Sewer Division . . .	1,162 74	
Treasury Department . . .	557 56	
Wire Department . . .	352 25	
Wayfarers' Lodge . . .	30 45	
Water Department:		
Income Division . . .	2,046 51	
Eastern Division . . .	939 03	
Western Division . . .	229 86	
Commissioner's Office . . .	492 99	
Engineer . . .	69 67	
Deacon and Waste System, . . .	21 26	
County of Suffolk:		
Superior Civil Court . . .	3,098 26	
Superior Criminal Court . . .	1,856 78	
Treasurer . . .	20 20	
Superior Court . . .	2 65	
Probate Court . . .	48 47	
Jail . . .	32 68	
North District Medical Examiner . . .	10 86	
Municipal Court, Charlestown, . . .	175 60	
Municipal Court, Brighton . . .	84 27	
Municipal Court, Roxbury . . .	207 68	
Municipal Court, West Roxbury . . .	73 63	
Municipal Court, South Boston, . . .	196 08	
Municipal Court, Dorchester . . .	18 23	
Municipal Court, East Boston, . . .	75 73	
	\$80,817 13	
Deduct City of Cambridge, not paid . . .	23 72	
		80,793 41
<i>Carried forward</i> . . .		
		\$149,593 41

<i>Brought forward</i>	\$149,593 41	
Stamps, postals and government envelopes for different departments	4,501 60	
Rents from sub-tenants:		
J. W. Cook & Son, 9 months, @ \$83.33 $\frac{1}{3}$.	750 00	
Estey Organ Company, 9 months, @ \$75.00	675 00	
Heating:		
Pitts, Kimball & Lewis, March, 1897	\$66 34	
Pitts, Kimball & Lewis, Octo- ber, November and December, 1897	212 50	
		278 84
Estate of James Parker:		
March. Five floors, 611 Wash- ington street	\$344 95	
October. Second, third and sixth floors, 611 Washington street	107 00	
November. Second, third and sixth floors, 611 Washington street	107 00	
December. Second, third and sixth floors, 611 Washington street	107 00	
October. Fourth and fifth floors, 611 Washington street, November. Fourth and fifth floors, 611 Washington street, December. Fourth and fifth floors, 611 Washington street,	86 00 86 00 86 00	
		923 95
Steam power:		
Estate of James Parker, 611 Washington street:		
Running passenger elevator, 10 months, @ \$50.00	\$500 00	
Running freight elevator, 10 months, ...	333 31	
		833 31
Printing and stationery	834 54	
Sale of cylinder press	1,500 00	
Sale of old material	125 00	
Transfer from surplus revenue	2,211 71	
		\$162,227 36

EXPENDITURES OF PRINTING DEPARTMENT FROM FEB-
RUARY 1, 1897, TO JANUARY 31, 1898.*Printing Plant.*

Pay Roll:

Week ending

March	5	.	\$159	14	
"	11	.	369	68	
"	18	.	502	24	
"	25	.	720	19	
					\$1,751 25
April	1	.	\$965	83	
"	8	.	1,146	96	
"	15	.	1,172	13	
"	22	.	1,245	31	
"	29	.	1,174	86	
					5,705 09
May	6	.	\$1,245	17	
"	13	.	1,227	68	
"	20	.	1,468	09	
"	27	.	1,483	15	
					5,424 09
June	3	.	\$1,475	99	
"	10	.	1,540	80	
"	17	.	1,577	03	
"	24	.	1,614	75	
					6,208 57
July	1	.	\$1,783	59	
"	8	.	1,093	17	
"	15	.	998	40	
"	22	.	1,066	16	
"	29	.	1,135	22	
					6,076 54
August	5	.	\$960	49	
"	12	.	1,398	09	
"	19	.	2,436	62	
"	26	.	3,083	73	
"	31	.	1,517	19	
					9,396 12
September	2		\$332	15	
"	9		1,317	85	
"	16		1,224	78	
"	23		1,266	02	
"	30		1,205	05	
					5,345 85
October	7	.	\$1,162	63	
"	14	.	1,220	90	
"	21	.	1,314	83	

Carried forward, \$3,698 36 \$39,907 51

VIEWS OF COMPOSING ROOM.



PRINTING DEPARTMENT.

9

Brought forward, \$3,698 36 \$39,907 51

October 28	.	1,605	10		
					5,303 46

November 4	\$1,412	63			
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" 11	1,220	96			
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" 18	1,197	39			
------	-------	----	--	--	--

" 25	1,231	63			
					5,062 61

December 2	\$1,164	31			
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" 9	1,487	30			
-----	-------	----	--	--	--

" 16	1,830	07			
------	-------	----	--	--	--

" 23	1,421	07			
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" 30	1,211	06			
					7,113 81

January 6	\$1,526	78			
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" 13	1,251	93			
------	-------	----	--	--	--

" 20	1,210	41			
------	-------	----	--	--	--

" 27	1,196	02			
					5,185 14

					\$62,572 53
--	--	--	-------	--	-------------

Extra pay-roll for stenographer, fire-					
man, janitor and overtime	.	.	.		420 30

Binding, ruling, numbering and perforating:

March	\$240	13			
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April	871	23			
---------------	-----	----	--	--	--

May	619	03			
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June	1,204	40			
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July	2,009	96			
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August	2,050	74			
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September	1,304	28			
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October	2,293	19			
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November	1,625	45			
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December	1,903	78			
					14,122 19

Paper stock:

March	\$364	40			
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April	1,120	26			
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May	668	87			
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June	1,438	24			
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July	333	93			
--------------	-----	----	--	--	--

August	857	16			
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September	132	47			
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October	431	35			
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November	3,026	88			
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December	2,097	20			
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January	648	51			
					11,119 27

<i>Carried forward</i>	.	.	.		\$88,234 29
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Brought forward . . . \$88,234 29

Rent :

March 1 to December 1, nine months,
at \$321.67 . . . 2,895 03

Lithographing and engraving :

May	\$30 64	
June	319 16	
July	67 50	
August	669 50	
September	64 27	
October	157 94	
November	37 44	
December	335 00	
		1,681 45

Fuel :

March	\$182 40	
April	138 86	
May	55 62	
June	49 44	
July	80 04	
August	62 64	
September	83 52	
October	104 40	
November	146 16	
		903 08

Insurance :

March	\$749 71	
April	68 00	
August	46 66	
		864 37

Electrotyping :

March	\$20 35	
April	48 07	
May	76 69	
June	59 90	
July	31 57	
August	277 30	
September	66 22	
October	94 44	
November	34 50	
		709 04

Compiling Municipal Register and Index :

Compiling	\$258 00	
Typewriting	74 40	
		332 40

Carried forward . . . \$95,619 66

<i>Brought forward</i>					\$95,619 66
Gas :					
March and April	.	.	.		\$73 26
May	.	.	.	.	23 22
June	.	.	.	.	27 90
July	.	.	.	.	25 56
August	.	.	.	.	44 01
September	.	.	.	.	32 94
October	.	.	.	.	40 77
					267 66
General supplies	.	.	.	.	244 57
Ink :					
March	.	.	.	.	\$51 50
April	.	.	.	.	39 88
May	.	.	.	.	27 69
June	.	.	.	.	22 38
July	.	.	.	.	13 50
August	.	.	.	.	20 25
September	.	.	.	.	21 00
November	.	.	.	.	42 40
					238 60
Telephone service :					
March	.	.	.	.	\$37 67
June	.	.	.	.	48 00
September	.	.	.	.	36 25
December	.	.	.	.	28 95
					150 87
Oil, benzine and waste :					
March	.	.	.	.	\$14 32
April	.	.	.	.	19 75
May	.	.	.	.	5 60
June	.	.	.	.	17 20
July	.	.	.	.	28 10
August	.	.	.	.	16 10
September	.	.	.	.	14 70
October	.	.	.	.	17 70
November	.	.	.	.	16 10
					149 57
Miscellaneous stock for printing :					
Tags	.	.	.	.	\$49 93
Clasp envelopes	.	.	.	.	41 32
Brass rings and chains	.	.	.	.	34 57
Cloth	.	.	.	.	9 56
					135 38
Composition, Boston Machine Com-					
pany (special work)	.	.	.	.	125 00
<i>Carried forward</i>	.	.	.	.	\$96,931 31

<i>Brought forward</i>	.	.	.	\$96,931	31
Washing towels and cleaning offices	.	.	.	119	69
Press-room supplies	.	.	.	114	90
Rollers for press	.	.	.	110	41
Typewriter	.	.	.	96	75
Repairs :					
Boiler	.	.	.	\$61	88
Elevator	.	.	.	31	86
					93 74
Stationery	.	.	.	89	25
Cartage	.	.	.	87	70
Car-fares	.	.	.	81	00
Wrapping paper and twine	.	.	.	57	16
Printing :					
Century Company	.	.	.	\$50	00
Libbie Show Print	.	.	.	5	00
					55 00
Water-rates	.	.	.	18	20
					97,855 11

Cost of Printing Plant.

John Cashman & Co. . . . \$30,000 00
 Type, cases, etc.:

March	.	.	.	\$2,064	75
April	.	.	.	1,047	41
May	.	.	.	334	28
June	.	.	.	860	37
July	.	.	.	309	85
August	.	.	.	3,523	75
September	.	.	.	115	19
October	.	.	.	115	30
November	.	.	.	45	75
December	.	.	.	1,901	96
					10,318 61

Repairs and alterations of building and fixtures	.	.	.	1,000	89
Moving presses	.	.	.	466	25
Furniture for office	.	.	.	295	62
Installing telephones	.	.	.	237	28
Safe	.	.	.	187	50
Time register system	.	.	.	170	00
Appraising plant	.	.	.	214	00
Typewriting	.	.	.	53	00

Carried forward . . . \$42,943 15 \$97,855 11

PRINTING DEPARTMENT.

13

<i>Brought forward.</i>	\$42,943 15	\$97,855 11
Advertising for proposals of printing plant	37 75	
		42,980 90

General Expenses.

Salary, Superintendent	\$2,991 56	
Salary, assistant, clerk-hire and messenger	2,709 68	
		\$5,701 24

Drafts, for postage for sale to departments:

Postage billed direct to departments . \$5,538 55

Government envelopes and postals printed for departments . 3,976 81

Use of office printing department . 30 60

Cash in bank Feb. 1, 1898 . 449 04

Stamps on hand, Feb. 1, 1898 . 5 00

10,000 00

Printing and engraving:

Printing, Rockwell & Churchill:

February, \$811 67

March, 749 93

April, 897 40

May, 231 62

June, 581 44

July, 60 22

August, 58 47

\$3,390 75

Bonds, City Treasurer . 552 00

Engraving . 67 50

4,010 25

Binding:

March . \$4 50

Carried forward . \$4 50 \$19,711 49 \$140,836 01

<i>Brought forward</i> .	\$4 50	\$19,711 49	\$140,836 01
<i>Binding, continued.</i>			
April	6 75		
May	753 75		
		765 00	
Printing and engraving:			
Pocket edition of Rules and Orders for City Council . .		540 00	
Stationery		206 81	
Telephone No. 1072 . .		129 65	
Messenger service . . .		15 70	
Electrical construction . .		12 20	
Expressing		10 50	
			21,391 35
Total			<u>\$162,227 36</u>

STATEMENT OF OPERATION OF PRINTING PLANT FROM
MARCH 1, 1897, TO FEBRUARY 1, 1898, INCLUDING
REVENUE UNCOLLECTED AND EXPENDITURES NOT
PAID.

Operation of Printing Plant.

Revenue from printing as shown on page 6,	\$80,793 41
Uncollected revenue for printing to February 1, 1898, as follows:	
Auditing Department	\$117 88
Building Department	1,017 35
Collecting Department	795 28
City Messenger Department . .	706 91
City Clerk's Department . . .	130 19
Cemetery Department	155 47
Clerk of Committees Department	81 17
City Council, Incidental Expenses	60 08
City Record	1,361 92
Election Department	484 66
Engineering Department . . .	248 43
Fire Department	399 68
Hospital Department	518 78
Health Department	402 99
<i>Carried forward</i>	<u>\$80,793 41</u>

<i>Brought forward . . .</i>	\$6,480 79	\$80,793 41
Institutions Departments:		
Institutions	73 53	
Austin Farm	131 65	
Pierce Farm	43 27	
Institution Registration	53 52	
Penal Institutions	360 66	
Pauper Institutions	44 43	
Lamp Department	68 93	
Law Department	57 12	
Market Department	41 00	
Mayor's Department	217 29	
Municipal Statistics Department, ...	59 00	
Overseers of the Poor	77 06	
Police Department	723 01	
Liquor License	40 00	
Police Signal Service	9 40	
House of Detention	19 58	
Park Department	34 83	
Public Parks	74 85	
Strandway	7 85	
Public Buildings	279 64	
School-houses	57 44	
Architects' Division	10 15	
Registry Department	325 30	
Street Laying-out Department	461 74	
Street Laying-out and Construc- tion of Highways	565 85	
Street Department:		
Bridge Division	136 21	
Street Cleaning Division	105 12	
Sanitary Division	207 66	
Sewer Division	189 79	
Paving Division	1,210 46	
Ferry Division	111 72	
Cambridge Bridge	23 72	
Central Office	41 65	
Sewerage Works	98 48	
South Union Station	97 49	
Soldiers Relief Department	127 49	
Sealing of Weights and Measures Department	6 00	
Treasury Department	30 77	
Water Department	747 03	
<i>Carried forward</i>	\$13,451 48	\$80,793 41

<i>Brought forward</i>	\$13,451 48	\$80,793 41
Wire Department	126 80	
County of Suffolk:		
Superior Civil Court	830 23	
Superior Criminal Court	270 33	
Treasurer	9 65	
Superior Court	8 25	
Probate Court	23 14	
East Boston District Court	15 01	
Municipal Court, Charlestown, ...	5 00	
Municipal Court, South Boston, ...	36 54	
Municipal Court, West Rox-		
bury	2 00	
Municipal Court, Roxbury	192 63	
		14,971 06

*Printing of Documents, etc., Charged to the
Printing Appropriation.*

2,000 Municipal Registers	\$2,672 51
3,500 Auditor's annual reports	2,138 43
1,000 copies, each, twelve lots, Auditor's Monthly Exhibit	1,574 94
800 annual reports, Street Depart- ment	1,131 63
800 annual reports, Street Laying- out Department	857 27
800 annual reports, Water De- partment	750 43
2,300 Fourth of July Orations, John F. Fitzgerald	481 02
800 annual reports, Hospital De- partment	610 44
600 Acts relative to City of Bos- ton, passed by Legislature of 1897	499 12
800 annual reports, Engineering Department	426 99
800 annual reports, Institutions Department	421 96
800 annual reports, Library De- partment	368 92
800 annual reports, Health De- partment	356 05

<i>Carried forward</i>	\$12,289 71	\$95,764 47
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CORNER OF PRESS ROOM, AND VIEW
SHOWING JOB PRESS DEPARTMENT.

<i>Brought forward</i> . . .	\$12,289 71	\$95,764 47
250 copies, each, thirty-two lots, Common Council Calendar . . .	336 45	
600 copies, each, eleven lots, Col- lector's Monthly Report . . .	276 55	
2,100 copies Fourth of July Ora- tion, Edward Everett Hale . . .	416 31	
800 annual reports, Collecting De- partment	243 03	
800 Mayor's Inaugural Address, . . .	242 64	
600 copies, each, eleven lots, City Treasurer's monthly report . . .	227 84	
600 Everett memorials	215 43	
100 copies, each, thirty-four lots, Order of Business for Board of Aldermen	196 47	
800 annual reports, Park Depart- ment	191 26	
800 annual reports, Public Build- ings Department	187 91	
800 annual reports, Building De- partment	174 82	
800 annual reports, Wire Depart- ment	160 22	
800 annual reports, Treasury De- partment	135 40	
600 documents, Non-resident Teachers in Boston Public Schools	114 86	
600 reports, Examiners, City and County Treasurer	108 66	
800 annual reports, Law Depart- ment	67 99	
800 annual reports, Registry De- partment	64 33	
800 annual reports, Fire Depart- ment	62 96	
600 documents, Loan Estimates . . .	57 19	
600 documents, Report of Munic- ipal Statistics Office in Europe, . . .	53 91	
800 annual reports, Lamp Depart- ment	51 83	
800 annual reports, Printing De- partment	51 56	
<i>Carried forward</i>	\$15,927 33	\$95,764 47

<i>Brought forward</i>	\$15,927 33	\$95,764 47
800 annual reports, Overseeing of the Poor	50 64	
600 documents, Committee on Claims	42 00	
800 annual reports, Mt. Hope Cemetery	40 61	
600 documents of Inspection of Prisons, first semi-annual report, ...	34 77	
800 annual reports, Public Grounds	34 45	
800 annual reports, Sinking Fund, ...	32 07	
600 documents, South Terminal Station	31 59	
600 documents, Com. Babbitt's Report, Board of Health	30 65	
800 annual reports, Sealing of Weights and Measures	22 92	
600 documents, Mayor's Message on Printing Plant	20 91	
600 documents, second semi-annual report, Inspector of Prisons	19 27	
600 documents, Message vetoing items of Loan Orders	18 43	
250 temporary index, List of City Documents	18 20	
50 Finance Schedule	16 52	
600 documents, Message to Water Commissioner	16 41	
600 documents, Condemned Water Meters	16 08	
600 documents, Appropriation and Tax Orders, 1897-98	16 06	
600 documents, Loan Order, \$1,173,300	15 50	
600 documents, Second Appropriations	14 81	
600 documents, report of Committee Public Improvements	13 58	
750 loan circulars and 600 1-cent envelopes	13 29	
750 loan circulars and 500 2-cent envelopes	12 03	
<i>Carried forward</i>	\$16,458 12	\$95,764 47

<i>Brought forward</i>	\$16,458 12	\$95,764 47
600 documents, Bids for Construction of Columbia Road	11 56	
800 annual reports, City Messenger	11 43	
600 documents, List of Claims	11 39	
600 documents, report of Committee on Claims	11 25	
600 documents, report of Committee on Claims	10 84	
600 documents, communication from Water Commissioner	10 33	
600 documents, Lists of Claims, July and September	10 22	
600 documents, Transmitting chapter 426	10 04	
600 documents, Constable Appointments	9 90	
600 documents, List of Claims, May and June	9 88	
800 annual reports, City Clerk	9 68	
20 loan bills	9 46	
600 documents, report of Examination of Collecting Department,	9 23	
600 documents, communication from Commissioner of Wires	8 76	
1,000 yeas and nays, Common Council	8 70	
600 documents, report on Financial Results of Printing Office	8 32	
600 documents, Minor Appointments	7 94	
600 documents, Electrical Construction Division	7 82	
600 documents, Change in Business Methods of Water Department,	7 67	
600 documents, West Roxbury and Roslindale Street Railway,	7 57	
600 documents, Committee on Claims	7 05	
800 annual reports, Clerk of Committees	6 71	
600 documents, Eighth Location, Roxbury Street Railway	6 57	

<i>Carried forward</i>	\$16,670 44	\$95,764 47
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<i>Brought forward</i>	\$16,670 44	\$95,764 47
600 documents, First Location, Newtonville and Watertown Street Railway	6 37	
600 documents, Boston Transit Commission	6 32	
600 documents, Disposal of Gar- bage	6 32	
800 annual reports, Market De- partment.	5 96	
600 documents, Roslindale Street Railway Company	5 82	
600 documents, West Roxbury and Roslindale Street Railway Company	5 72	
800 annual reports, Inspector of Vessels and Ballast	5 67	
600 documents, West End Street Railroad	5 66	
600 documents, Committee on Markets	5 51	
600 documents, West Roxbury and Roslindale Street Railway Company	5 02	
600 documents, Norfolk Suburban Street Railway Co.	4 50	
600 documents, Regulations, 1897, Chapter 3	4 16	
600 documents, Message of Super- intendent of Streets	4 15	
600 documents, Regulations, 1897, Chapter 4	3 66	
600 documents, North End Park,	3 64	
600 documents, West End Street Railway	3 44	
600 documents, Electrical Con- struction	3 39	
600 documents, West Roxbury and Roslindale Street Railway Company	3 31	
600 documents, Bay-window Regu- lations	3 19	
600 documents, Memorial Day	3 14	
600 documents, Loan for Dor- chester Playground	3 14	
<i>Carried forward</i>	\$16,768 53	\$95,764 47

<i>Brought forward</i>	\$16,768 53	\$95,764 47
600 documents, West End Street Railway Company	3 14	
600 documents, Reed and Thorn- dike streets	3 14	
600 documents, Message on 20- foot Set Back	3 14	
600 documents, West End Street Railway Company	3 14	
600 documents, Office Hours, etc.,	3 14	
600 documents, West End Street Railway Company	2 99	
600 documents, Elevated Railway Company	2 98	
600 documents, West End Street Railway Company	2 94	
600 documents, West End Street Railway Company, petition . .	2 91	
600 documents, West End Street Railway Company	2 83	
100 Acts of 1896, Chapter 517 .	2 70	
600 documents, Regulations of 1897, Chapter 2	2 64	
100 notices of meeting, Common Council	1 98	
100 resolves, West End Street Railway Company	1 95	
50 envelopes, 1-cent stamps, Treas- urer	1 58	
Clerk of Common Council, printing,	7 73	
Printing Department, office ex- penses	88 17	
		16,905 63
Stock on hand, February 1, 1898 . . .		1,587 74
Unfinished work, " "		3,885 26
Rents from sub tenants. (<i>See</i> page 7) .		1,425 00
Rents of sub-tenants not paid February 1, 1898:		
Estey Organ Company, Decem- ber and January	\$150 00	
J. W. Cook & Son, December and January	166 66	
		316 66
Power and heat furnished. (<i>See</i> page 7) .		2,036 10
<i>Carried forward</i>		\$121,920 86

<i>Brought forward</i>		\$121,920 86
Power and heat not paid February 1, 1898 —		
Steam heat:		
Parker estate, 611 Washington street,		
January	\$193 00	
Pitts, Kimball & Lewis, ...	68 33	
		261 33
Steam power:		
Running passenger and freight elevators, Parker estate, 611 Washington street	83 33	
		344 66
Total		<u>\$122,265 52</u>

EXPENSES OF OPERATION OF PRINTING PLANT.

Expenditures paid up to January 31, 1898.		
(See page 12)		\$97,855 11
Pay-roll, extra, overtime:		
Fireman, etc., December	\$297 00	
“ January	167 75	
Weekly pay-roll, January 27, to February 1	620 41	
		1,085 16
Binding:		
December	\$247 96	
January	1,014 25	
		1,262 21
Paper stock:		
December	\$597 52	
January	1,748 80	
		2,346 32
Rent:		
December	\$321 67	
January	321 67	
		643 34
<i>Carried forward</i>		<u>\$103,192 14</u>

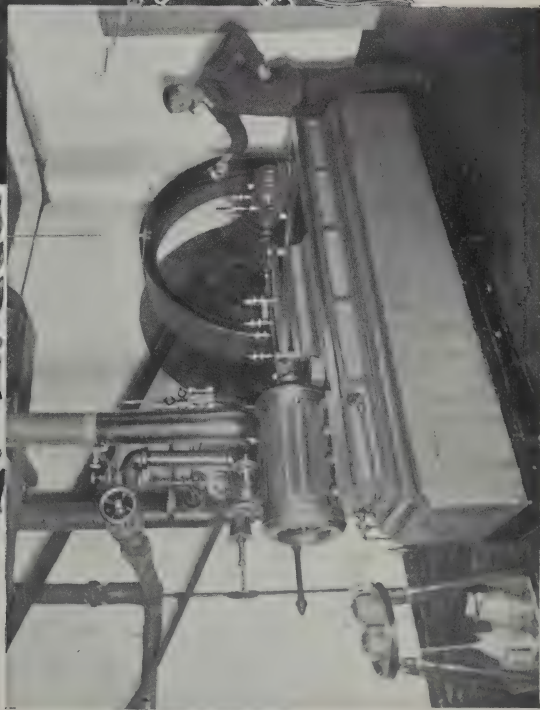
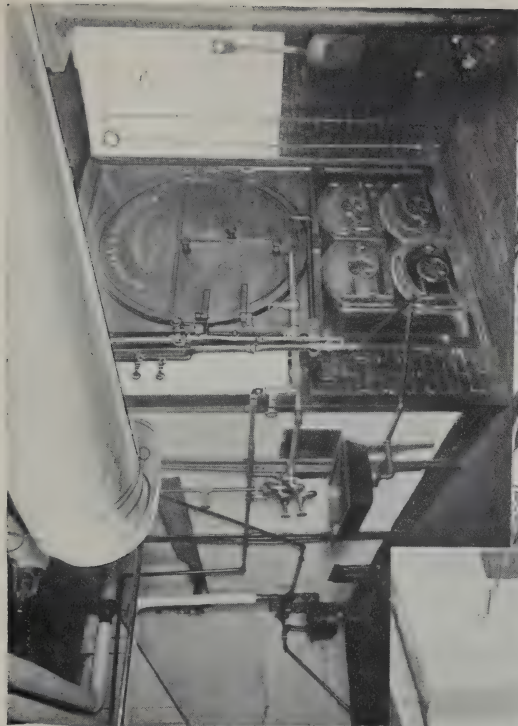
<i>Brought forward</i>	.	.	.	.	\$103,192 14	
Fuel:						
December	.	.	.	.	\$242 17	
January	.	.	.	.	125 28	
						367 45
General Supplies	.	.	.	.		273 78
Repairs:						
Boiler	.	.	.	.	\$93 25	
Elevator	.	.	.	.	32 25	
Presses	.	.	.	.	134 87	
						260 37
Engraving and Lithographing	.	.	.	.		255 78
Gas:						
December	.	.	.	.	\$113 85	
January	.	.	.	.	61 47	
						175 32
Water-rates:						
City of Boston	.	.	.	.	\$35 80	
Parker estate	.	.	.	.	84 50	
						120 30
Electrotyping:						
December	.	.	.	.	\$83 00	
January	.	.	.	.	17 25	
						100 25
Stationery	.	.	.	.		71 84
Oil, benzine and waste	.	.	.	.		47 68
Car-fares	.	.	.	.		40 00
Telephone	.	.	.	.		36 00
Miscellaneous stock	.	.	.	.		30 23
Wrapping paper and twine	.	.	.	.		21 86
Rollers for presses	.	.	.	.		15 60
Ink	.	.	.	.		15 00
Washing towels	.	.	.	.		10 75
Press-room supplies	.	.	.	.		10 01
Government envelopes and postal cards to which printing was added	.	.	.	.		3,976 81
Stamps credited in revenue, but not paid for,						1,036 95
						<u>\$110,058 12</u>

COST OF PLANT TO FEBRUARY 1, 1898.

Cost up to January 31, 1898. (<i>See</i> page 13)	\$42,980 90
Repairing	\$129 78
Type	545 35
	675 13
	\$43,656 03

CREDIT.

Sale of cylinder press	\$1,500 00
“ “ old material	125 00
	1,625 00
Total cost of printing plant	<u>\$42,031 03</u>
Total operation of printing plant (<i>See</i> page 22)	\$122,265 52
Total operating expenses of printing plant (<i>See</i> page 23)	110,058 12
Gain	\$12,207 40
Deduct depreciation on plant at rate of 10 per cent. per annum	4,203 10
Net gain	<u>\$8,004 30</u>



VIEW OF ENGINE ROOM, SHOWING ENGINE AND BOILER.

PRINTING AND STATIONERY EXPENDITURES, 1897.

Tables on the following pages show the cost of printing, stock, stationery and binding, supplied to the different departments of the city government, the courts of the County of Suffolk and other appropriations enumerated and paid for by the same, outside of the City of Boston Printing Plant.

	Printing done by Rockwell & Churchill.	Photo., Litho. and Plate Printing.	Stock from Supplies.	Special Stock.	Stock by Rockwell & Churchill.	Stationery.	Binding.	Totals.
Assessing Department.....	\$73 75	.....	\$3 38	\$14 00	\$17 00	\$2,231 60	.....	\$2,339 73
Auditing Department.....	31 80	.....	.....	.....	10 42	943 00	.....	985 22
Bath-house, Dover street.....	131 32	.....	.....	.....	4 71	.....	.....	136 03
Board of Aldermen:								
Contingent expenses	332 63	\$7 50	10 96	.....	14 73	32 00	.....	397 82
Soldiers' Relief.....	53 68	.....	.....	.....	13 45	64 99	.....	132 12
Building Department.....	430 79	14 76	.....	23 21	116 95	901 89	\$122 50	1,610 10
Congress-street Grade Crossing .....	.....	3 69	.....	.....	.....	7 08	.....	10 77
Cemetery Department.....	.....	.....	.....	.....	.....	47 73	.....	47 73
<i>Carried forward.....</i>	\$1,053 97	\$25 95	\$14 34	\$37 21	\$177 26	\$4,228 29	\$122 50	\$5,659 52

PRINTING AND STATIONERY EXPENDITURES, 1897—Continued.

	Printing done by Rockwell & Churchill.	Photo., Litho. and Plate Printing.	Stock from Supplies.	Special Stock.	Stock by Rockwell & Churchill.	Stationery.	Binding.	Totals.
<i>Brought forward</i>	\$1,053 97	\$25 95	\$14 34	\$37 21	\$177 26	\$4,228 29	\$122 50	\$5,659 52
City Clerk	43 58	.....	.....	.....	31 25	1,699 90	.....	1,774 73
City Council, Incidental Expenses	2,874 11	45 00	150 50	375 59	28 00	78 15	.....	3,551 35
City Messenger Department	310 55	164 50	1 32	110 06	25 62	927 19	6 00	1,545 24
Clerk of Committees Department	97 11	35 00	.....	6 95	16 86	466 42	.....	622 34
Collecting Department	533 77	10 00	20 77	26 59	81 36	1,115 84	42 65	1,830 98
Contingent Expenses, Common Council .....	.....	27 50	.....	.....	.....	.....	.....	27 50
Election Department	2,493 22	.....	.....	115 83	595 54	1,583 02	69 75	4,857 36
Engineering Department:								
Department expenses	32 40	64 78	.....	.....	13 00	476 66	.....	586 84
Charlestown Bridge .....	.....	.....	31	.....	.....	18 40	.....	18 71
Surveying Division	8 25	9 00	.....	17 12	1 85	156 84	61 00	254 06
<i>Carried forward</i>	\$7,446 96	\$381 73	\$187 24	\$689 35	\$970 74	\$10,750 71	\$301 90	\$20,728 63

PRINTING AND STATIONERY EXPENDITURES, 1897 — *Continued.*

	Printing done by Rockwell & Churchill.	Photo., Litho. and Plate Printing.	Stock from Supplies.	Special Stock.	Stock by Rockwell & Churchill.	Stationery.	Binding.	Totals.
<i>Brought forward</i>	\$7,446 96	\$381 73	\$187 24	\$689 35	\$970 74	\$10,750 71	\$301 90	\$20,728 63
Fire Department	138 43	10 00	.....	16 05	43 31	377 98	.....	585 77
Health Department.....	390 24	495 50	.....	40 29	478 37	653 53	.....	2,057 93
Hospital Department.....	1,185 37	153 25	.....	36 79	165 91	743 55	14 99	2,299 86
Hospital, South Department.....	174 03	25 00	.....	.....	72 30	278 72	.....	550 05
Institutions Department:								
Department expenses.....	227 50	.....	42	5 68	54 00	1 63	.....	289 23
Boston Almshouse and Hospital, Long Island	25 54	.....	.....	.....	2 75	.....	.....	28 29
Charlestown Almshouse .....	.....	.....	.....	.....	.....	54	.....	54
House of Correction, Deer Island.....	.....	.....	.....	.....	.....	7 79	.....	7 79
House of Correction, South Boston.....	.....	.....	.....	.....	.....	4 00	.....	4 00
<i>Carried forward</i>	\$9,588 07	\$1,065 48	\$187 66	\$788 16	\$1,787 38	\$12,818 45	\$316 89	\$26,552 09

PRINTING AND STATIONERY EXPENDITURES, 1897—Continued.

	Printing done by Rockwell & Churchill.	Photo, Litho. and Plate Printing.	Stock from Supplies.	Special Stock.	Stock by Rockwell & Churchill.	Stationery.	Binding.	Totals.
<i>Brought forward</i>	\$9,588 07	\$1,065 48	\$187 66	\$788 16	\$1,787 38	\$12,818 45	\$316 89	\$26,552 09
Insane Hospital, Austin Farm.....	15 50				2 00			17 50
“ “ Pierce Farm.....	9 70	6 50			2 00	80		19 00
Pauper						18 62		18 62
Penal.....						1 38		1 38
Lamp Department.....	77 45	8 00		1 73	12 71	36 90		136 79
Law “	24 39			95	45	203 05	5 00	283 84
Library “	10 00	48 30						58 30
Market “	18 81				4 07			23 48
Mayor “	74 23	23 70		437 78	47 58	408 87	137 69	1,189 85
Mount Hope Cemetery.....	19 27				2 30	28 17	13 00	62 74
Municipal Statistics Department.....						210 56		210 56
<i>Carried forward</i>	\$9,837 42	\$1,151 98	\$187 66	\$1,232 22	\$1,858 49	\$13,786 80	\$472 58	\$28,527 15

PRINTING AND STATIONERY EXPENDITURES, 1897 — Continued.

	Printing done by Rockwell & Churchill.	Photo., Litho. and Plate Printing.	Stock from Supplies.	Special Stock.	Stock by Rockwell & Churchill.	Stationery.	Binding.	Totals.
<i>Brought forward:</i>	\$9,837 42	\$1,151 98	\$187 66	\$1,232 22	\$1,858 49	\$13,786 80	\$472 58	\$28,527 15
Overseeing of the Poor Department.....	16 75				3 75	146 69		167 19
Park Department:								
Department Expenses	249 40	63 42		1 04	33 05	157 14		504 05
Public Pleasure Grounds	28 15				2 13			30 28
Public Parks.....	42 00				11 83	151 14		204 97
Arborway.....	24 37				1 78			26 15
Jamaica Park	25 68				1 15			26 83
North End Park.....	37 50				2 00	2 25		41 75
Strandway						5 56		5 56
Police Department:								
Department Expenses	702 40	79 50	11 57	62 45	107 21	1,129 93		2,093 06
<i>Carried forward.</i>	\$10,963 67	\$1,294 90	\$199 23	\$1,295 71	\$2,021 39	\$15,379 51	\$472 58	\$31,626 99

PRINTING AND STATIONERY EXPENDITURES, 1897—Continued.

	Printing done by Rockwell & Churchill.	Photo., Litho. and Plate Printing.	Stock from Supplies.	Special Stock.	Stock by Rockwell & Churchill.	Stationery.	Binding.	Totals.
<i>Brought forward</i>	\$10,963 67	\$1,294 90	\$199 23	\$1,295 71	\$2,021 39	\$15,379 51	\$472 58	\$31,626 99
House of Detention	23 05	.....	16	.....	6 40	1 25	.....	30 86
Incidental Expenses .....	.....	.....	.....	.....	.....	1 90	.....	1 90
Liquor License	187 85	34 50	28	.....	91 35	270 75	.....	584 73
Police Signal System	58 91	.....	16	39 40	9 50	49 75	.....	157 72
Public Buildings Department:								
Department Expenses	50 56	.....	.....	.....	11 15	227 61	27 00	316 32
Architect Division	10 35	.....	.....	.....	2 35	106 29	1 75	120 74
Electrical Construction Division	24 50	26 00	.....	.....	5 01	188 81	.....	244 32
Faneuil Hall .....	.....	.....	.....	.....	.....	6 26	.....	6 26
Public Buildings, Schools	47 91	.....	.....	.....	8 05	33 70	.....	89 66
School-houses, Improvement	52 04	.....	.....	.....	2 88	2 00	.....	56 92
<i>Carried forward</i>	\$11,418 84	\$1,355 40	\$199 83	\$1,335 11	\$2,158 08	\$16,267 83	\$501 33	\$33,236 42

PRINTING AND STATIONERY EXPENDITURES, 1897 — Continued.

PRINTING DEPARTMENT.

31

	Printing done by Rockwell & Churchill.	Photo., Litho. and Plate Printing.	Stock from Supplies.	Special Stock.	Stock by Rockwell & Churchill.	Stationery.	Binding.	Totals.
<i>Brought forward</i>	\$11,418 84	\$1,355 40	\$199 83	\$1,335 11	\$2,158 08	\$16,267 83	\$501 33	\$33,236 42
Public Celebrations .....	.....	.....	.....	.....	.....	10 00	.....	10 00
Public Grounds Department.....	2 50	.....	.....	2 40	.....	72 71	.....	77 61
*Printing Department.....	2,338 72	.....	.....	.....	54 96	.....	.....	2,393 68
Registry Department	616 71	.....	.....	.....	68 25	213 41	.....	898 37
School Committee:								
Department expenses.....	5,104 08	.....	.....	.....	1 70	.....	.....	5,105 78
School-houses, Adams and King streets..	39 67	.....	.....	.....	1 25	.....	.....	40 92
“ Chamber and Poplar sts.,..	30 54	.....	.....	.....	75	.....	.....	31 29
“ Chestnut Hill avenue.....	148 46	.....	.....	.....	4 35	.....	.....	152 81
“ Leyden street.....	25 82	.....	.....	.....	80	.....	.....	26 62
<i>Carried forward</i>	\$19,725 34	\$1,355 40	\$199 83	\$1,337 51	\$2,290 14	\$16,563 95	\$501 33	\$41,973 50

*This item includes printing of City Documents, Calendars for the Board of Aldermen and Common Council, Annual Reports for Assessing and Election Departments, previous to the establishment of the Plant.

PRINTING AND STATIONERY EXPENDITURES, 1897 — *Continued.*

	Printing done by Rockwell & Churchill.	Photo., Litho. and Plate Printing.	Stock from Supplies.	Special Stock.	Stock by Rockwell & Churchill.	Stationery.	Binding.	Totals.
<i>Brought forward</i>	\$19,725 34	\$1,355 40	\$199 83	\$1,337 51	\$2,290 14	\$16,563 95	\$501 33	\$41,973 50
School-houses, Monroe street.....	31 02	.....	.....	.....	75	.....	.....	31 77
" Moulton street.....	33 29	.....	.....	.....	1 00	.....	.....	34 29
" Paris and Gove streets...	31 29	.....	.....	.....	1 00	.....	.....	32 29
" Prince street.....	200 44	.....	.....	.....	7 90	.....	.....	208 34
" Richmond street.....	29 79	.....	.....	.....	1 00	.....	.....	30 79
" South and Hewlett sts...	96 10	.....	.....	.....	2 88	.....	.....	98 98
" Vernon street.....	50 26	.....	.....	.....	2 00	.....	.....	52 26
Sealing of Weights and Measures Depart- ment	35 20	.....	.....	.....	11 20	81 56	.....	127 96
Sinking Fund Department.,.....	162 03	16 00	.....	.....	4 50	16 00	.....	198 53
South Union Station.....	29 97	89	.....	.....	3 13	3 00	.....	36 99
<i>Carried forward</i>	\$20,424 73	\$1,372 29	\$199 83	\$1,337 51	\$2,325 50	\$16,664 51	\$501 33	\$42,825 70

PRINTING AND STATIONERY EXPENDITURES, 1897 — Continued.

	Printing done by Rockwell & Churchill.	Photo., Litho. and Plate Printing.	Stock from Supplies.	Special Stock.	Stock by Rockwell & Churchill.	Stationery.	Binding.	Totals.
<i>Brought forward</i>	\$20,424 73	\$1,372 29	\$199 83	\$1,337 51	\$2,325 50	\$16,664 51	\$501 33	\$42,825 70
Street Department:								
Bridge Division	137 07	.....	.....	53	52 77	164 15	2 00	356 52
Cambridge Bridge Division	1 40	.....	.....	.....	10 78	17 21	.....	29 39
Central Office	19 43	.....	.....	.....	14 90	302 87	120 00	457 20
Ferry Division	393 75	.....	.....	.....	43 14	309 47	.....	746 36
Paving Division:								
Department Expenses	440 35	50 75	6 38	27 08	238 13	1,530 51	.....	2,293 20
Laying-Out and Construction of High- ways	15 21	.....	.....	.....	9 25	.....	.....	24 46
Sanitary Division	164 03	11 25	.....	9 00	56 33	716 48	.....	957 09
Sewer Division:								
Department Expenses	188 35	9 00	.....	2 72	175 06	1,666 95	9 50	2,051 58
<i>Carried forward</i>	\$21,784 32	\$1,443 29	\$206 21	\$1,376 84	\$2,925 86	\$21,372 15	\$632 83	\$49,741 50

PRINTING AND STATIONERY EXPENDITURES, 1897 — Continued.

	Printing done by Rockwell & Churchill.	Photo., Litho. and Plate Printing.	Stock from Supplies.	Special Stock.	Stock by Rockwell & Churchill.	Stationery.	Binding.	Totals.
<i>Brought forward</i>	\$21,784 32	\$1,443 29	\$206 21	\$1,376 84	\$2,925 86	\$21,372 15	\$632 83	\$49,741 50
Blue Hill and other avenues	90 32	.....	.....	.....	1 93	.....	.....	92 25
Laying-Out and Construction of High- ways	114 60	.....	.....	.....	7 33	80 13	.....	202 06
Sewerage Works .....	.....	.....	.....	.....	.....	759 80	.....	759 80
Sewerage Works, Moon Island .....	.....	.....	.....	.....	.....	17 23	.....	17 23
Stony Brook Improvement	44 21	.....	.....	.....	2 80	58 82	.....	105 83
Street Cleaning Division	110 57	.....	.....	1 60	35 02	379 02	.....	526 21
Street Watering Division	18 69	.....	.....	4 95	24 89	96 88	.....	144 91
Street Laying-Out Department	7 30	16 50	.....	.....	1 55	139 51	.....	164 86
Street Laying-Out and Construction of Highways	10 05	359 50	.....	20 71	1 90	188 46	30 25	610 87
Treasury Department	25 10	216 00	.....	.....	24 80	191 46	.....	457 36
<i>Carried forward</i>	\$22,205 16	\$2,035 29	\$206 21	\$1,404 10	\$3,025 58	\$23,283 46	\$662 08	\$52,822 88

PRINTING AND STATIONERY EXPENDITURES, 1897 — Continued.

	Printing done by Rockwell & Churchill.	Photo., Litho. and Plate Printing.	Stock from Supplies.	Special Stock.	Stock by Rockwell & Churchill.	Stationery.	Binding.	Totals.
<i>Brought forward</i>	\$22,205 16	\$2,035 29	\$206 21	\$1,404 10	\$3,025 58	\$23,283 46	\$663 08	\$52,822 88
Water Department	1,334 99	37 38	.....	15 93	96 83	710 23	.....	2,195 36
Income Division	435 44	.....	.....	53 76	83 73	391 48	26 00	990 41
Wire Department	52 45	3 34	.....	9 50	8 60	322 78	.....	396 67
County of Suffolk:								
Auditor	9 00	.....	.....	.....	88	17 00	.....	26 88
East Boston District Court .....	.....	.....	.....	.....	.....	3 71	.....	3 71
Medical Examiner	7 75	.....	.....	.....	1 60	5 00	.....	14 35
Municipal Court, Brighton	7 65	.....	.....	.....	1 05	.....	.....	8 70
“ “ Charlestown	5 00	.....	.....	.....	2 15	88 82	.....	95 97
“ “ Civil Business .....	.....	.....	.....	.....	.....	10 50	.....	10 50
“ “ Criminal Business .....	.....	.....	.....	.....	.....	18 50	.....	18 50
<i>Carried forward</i>	\$24,057 44	\$2,076 01	\$206 21	\$1,483 29	\$3,220 42	\$24,851 48	\$689 08	\$56,583 93

PRINTING AND STATIONERY EXPENDITURES, 1897. — *Concluded.*

	Printing done by Rockwell & Churchill.	Photo., Litho. and Plate Printing.	Stock from Supplies	Special Stock.	Stock by Rockwell & Churchill.	Stationery.	Binding.	Totals.
<i>Brought forward</i>	\$24,057 44	\$2,076 01	\$206 21	\$1,483 29	\$3,220 42	\$24,851 48	\$689 08	\$56,583 93
Municipal Court, Dorchester	82 65	.....	.....	16 17	78	.....	.....	99 60
“ “ Roxbury	39 95	.....	.....	16 80	4 65	218 16	.....	279 56
“ “ South Boston	28 85	.....	.....	60	8 35	38 55	.....	76 35
“ “ West Roxbury	24 70	.....	.....	.....	5 44	.....	.....	30 14
Probate Court.....	72 46	.....	.....	.....	23 75	1,012 13	.....	1,108 34
Public Buildings	6 40	.....	.....	.....	1 00	.....	.....	7 40
Registry of Deeds	173 55	.....	.....	233 10	.....	3,049 70	375 00	3,831 35
Registry of Deeds, consolidated .....	.....	.....	.....	.....	.....	1,772 42	.....	1,772 42
Superior Civil Court.....	1,355 81	.....	.....	2 90	83 67	1,735 96	.....	3,178 34
Superior Criminal Court.....	264 08	.....	.....	.....	47 33	479 63	140 75	931 79
Supreme Judicial Court .....	.....	.....	.....	.....	.....	11 30	.....	11 30
<i>Total</i>	\$26,105 89	\$2,076 01	\$206 21	\$1,732 86	\$3,395 39	\$33,169 33	\$1,204 83	\$67,910 52

Clerk of Common Council :

Printing	\$7 73
Stationery	30 03
Binding records	7 75
	\$45 51

The extra publications issued during the year were as follows:

- 1,500 Statutes relating to the city of Boston.
- 650 Reports of Printing Plant Investigation.
- 2,500 Shaw Memorials.
- 2,500 Memorial Services at John Boyle O'Reilly Monument.
- 2,500 Seventy-fifth Anniversary of Boston City Government, charged to the appropriation for the City Council, Incidental Expenses.
- 600 Everett Centennial Memorials, charged to the appropriation for the Registry Department.
- 2,000 Municipal Registers.
- 2,300 John F. Fitzgerald Fourth of July Oration.
- 2,100 Edward Everett Hale Fourth of July Oration, charged to the appropriation for the Printing Department.

The following is a statement of the expenditures for City Council — City Council Proceedings :

Newspaper reports	\$708 33
Stenographic reports	5,100 00
Indexing proceedings	1,200 00
Printing, binding and paper for index	1,877 83
	\$8,886 16

Respectfully submitted,

THOMAS A. WHALEN,
Superintendent of Printing.

BOSTON, October 15, 1897.

HON. JOSIAH QUINCY, *Mayor of Boston*:

SIR: As requested by you we have made an examination of the results of the operation of the Municipal Printing Plant for the first six months to September 1, 1897, the basis being a comparison with the cost to the City for the same work under the contract with Messrs. Rockwell & Churchill, which existed prior to the establishment of the Plant.

We employed Mr. William Franklin Hall, an expert accountant of large experience and high standing, to make up the accounts, with instructions to make a thorough and exhaustive report, based on original vouchers.

The prices for work have been credited under the supervision of Mr. Thomas P. Nichols, of Lynn, a practical printer, thoroughly conversant with work of this nature, and a well-known member of the Master Printers' Club, who has personally examined and valued the work done, on the basis of the Rockwell & Churchill contract.

The cost of the Plant has been carefully calculated by us, on a conservative business basis, and we have charged to operating expense depreciation at the rate of ten per cent. per annum on the total cost of the plant.

A careful account of stock on hand, and work in process, was taken September 1, and all unpaid bills entered in our account. We find the actual net cost of the Plant to the City after deducting for depreciation as above, to have been \$37,787.49.

We find the result of the six months' operation of the Plant to have been a profit to the City of \$6,360.16.

Respectfully submitted,

JAMES P. STEARNS.
GEORGE H. ELLIS.
JOHN C. COBB.

REPORT ON THE MUNICIPAL PRINTING PLANT OF
THE CITY OF BOSTON.

[From March 1, 1897, to August 31, 1897.]

This report covers the operations of the Plant from its commencement in March, 1897, to August 31, 1897, inclusive, a period of about six months, though in reality it was not in full operation until well into the month of March.

In order to institute a comparison as to the results of carrying on the business by the City as against the system which prevailed and which had been in existence for many years, of having the city printing done by contract, it was arranged that all work done should be charged at the same rates as provided for in the contract under which the City had been paying those who had been furnishing the printing required for their several departments.

As this is the basis upon which the examination chiefly rests it was of the greatest importance that these charges should be carefully scrutinized, in order to see if they were made in conformity with the rates the City had been paying.

This portion of the work was entrusted to Mr. Thomas P. Nichols, of Lynn, a practical printer of long experience, and thereby fitted for the duty. He has carefully examined each item of the charges entered upon the books for work done and delivered to the various departments of the City and County; has compared them with the schedule of rates under which the city printing was paid for by the contract, and, wherever any differences were discovered, has noted the same. The result of his examination will appear in the statements which follow:

In the City Auditor's Exhibit of October 1, 1897, under the head of Printing Department, the amount of money expended from January 1, 1897, to date, is there given as \$112,435.95.

This includes all money paid out for every purpose which may properly be charged to this department. In order to ascertain what portion of this sum had been paid out for matters which concerned the Printing Plant, it became necessary to analyze the charges for this period. This was done by consulting the bills which had been paid, and which were found on the files in the office of the City Auditor. These bills were all listed and described so as to determine whether or not they were for supplies that belonged to the Plant; the lists were gone over with those who are employed at the office of the Plant as to bills about which there was any doubt, and finally the charges to the Printing Department were classified under three heads: Bills chargeable to

operation of Printing Plant; bills chargeable, or on account of additions to the Plant itself; bills chargeable to the City Hall Office or for matters which did not concern the Plant.

This will be made clear by the following statement:

PRINTING DEPARTMENT.

Amount expended to October 1, 1897, per Auditor's report	\$112,435 95
Deduct September pay-rolls	6,087 47
	\$106,348 48
Add unpaid bills dated prior to September 1, 1897,	4,728 36
	\$111,076 84
Deduct amount received from sale of press and materials	1,625 00
	\$109,451 84
Amount of bills charged to expenses of operation of Printing Plant	\$54,555 31
Amount expended for Plant and for addition to the same . . . \$41,401 30	
Less amount received from sale of press and materials	1,625 00
	39,776 30

CITY HALL OFFICE BILLS.

Pay-rolls at City Hall, including salary of Superintendent . . .	\$3,299 10
Rockwell & Churchill	2,666 58
Postage stamps, etc.	5,500 00
Sundry bills	3,654 55
	15,120 23
Total	\$109,451 84

Thus accounting for the amount stated to have been expended by the Auditor.

PLANT.

Amount paid John Cashman	\$30,000 00
Amount paid three appraisers	225 00
Bills for advertising for proposals	37 75
Carpenter work	871 89
E. C. Morris Safe Co.	187 50
Furniture	176 25
Boston Type Foundry	\$1,696 88
<i>Carried forward</i>	\$1,696 88
	\$31,498 39

<i>Brought forward</i>	\$1,696 88	\$31,498 39
American Type Foundry	6,303 35	
H. C. Hansen	767 17	
Freeman, Woodley & Co. . . .	725 80	
Rockwell & Churchill	249 65	
		9,742 85
Sundry miscellaneous bills		160 06
Total		\$41,401 30
Deduct amount received from the sale of press	\$1,500 00	
Also for sale of materials	125 00	
		1,625 00
Leaving the amount		\$39,776 30
Less depreciation at rate of 10 per cent. per annum		1,988 81
Net cost of Printing Plant		<u>\$37,787 49</u>

OPERATION OF MUNICIPAL PRINTING PLANT.

The receipts of work done and charged to the various departments upon the schedule of rates in use prior to the establishment of the Plant, covering the period from the beginning to the 31st of August, 1897, inclusive, amount by the book of charges, to the sum of \$55,813 77

On examination by Mr. Thomas P. Nichols this
is reduced by reason of errors (see page 43) 1,290 14

Leaving the amount \$54,523 63

The unfinished work or jobs
under way August 31, 1897,
amount to \$4,660 61

Paper stock on hand 1,311 91

5,972 52

Total \$60,496 15

In accordance with a custom that prevailed credit
is given for storage and care of stock, six
months, at \$75 per month \$450 00

The following credits are also given:

Rents of sub-tenants 950 01

Power and heat furnished 911 28

Unearned insurance premiums 422 39

2,733 68

Grand total \$63,229 83

Carried forward \$63,229 83

Brought forward \$63,229 83

EXPENSES OF OPERATION.

Pay-rolls for the entire period	\$34,561 66
Bills for binding, etc.	6,060 84
Bills for paper stock, etc.	5,859 95
Moving presses, etc.	366 96
Other bills for rent and various supplies	7,705 90
	\$54,555 31

To which add :

Paper received from Rockwell & Churchill	325 55
Amount charged to operating expenses for depreciation on Plant at the rate of 10 per cent. per annum	1,988 81

Total expenses of operation 56,869 67

Net gain \$6,360 16

SCHEDULE OF CORRECTIONS OF CHARGES.

[As referred to on p. 41.]

Assessing Department	\$35 55
Buildings Department (Inspector of Buildings)	5 74
City Council, Incidental Expenses	132 77
Collecting	47 32
City Hospital	2 00
Election	49 08
Engineering	1 90
Fourth of July	18 13
Health	10 34
Hospital	31 74
“ South Department	7 90
Institution	19 64
Library	37 34
Municipal Court, Charlestown	1 40
Overseers of Poor	3 75
Printing	629 36
Police	38 00
Park	1 20
Sealing of Weights and Measures	2 53
Superior Civil Court	52 43
Street Sanitary	5 93
“ Sewers	3 18

Carried forward \$1,137 23

<i>Brought forward</i>	.	.	.	.	.	\$1,137 23
Street Paving	.	.	.	.	.	76 76
“ Cleaning	.	.	.	.	.	3 04
“ Laying Out	.	.	.	.	.	6 90
Water Income	.	.	.	.	.	49 08
“ Eastern Division	.	.	.	.	.	7 56
“ Western Division	.	.	.	.	.	5 37
Wire	.	.	.	.	.	1 65
Treasury	.	.	.	.	.	1 40
Street Department — Ferry Division	.	.	.	.	.	38
“ “ Bridge	.	.	.	.	.	39
“ “ Watering	.	.	.	.	.	38
						\$1,290 14

The details of the account of paper stock on hand August 31, 1897, and of the work in process at that date, are not given in this report, but can be supplied if required. Also the details of the charges or expenses of operation can be furnished as well, but are omitted now, as considerable space would be required to give them in full. As to the account of paper on hand and work under way, these have been verified by Mr. Nichols, who examined the charges for work done at the printing-office and are undoubtedly correct.

By the Auditor's report of October 1, 1897, the following figures appear in connection with the Printing Department.

The Department is credited :

With balance transferred	.	.	.	.	\$40,000 00
With appropriation	.	.	.	.	28,800 00
With revenue	.	.	.	.	45,226 93
Total	.	.	.	.	\$114,026 93

It is charged with :

Expenditures to date	.	.	.	.	112,435 95
Leaving unexpended	.	.	.	.	\$1,590 98

The amount given in the Auditor's report (\$45,226.93) differs considerably from the figures used in my report. This could hardly be otherwise, and may be accounted for in the following way :

On the books of the Printing Plant the different City and County Departments are charged with work done and delivered, yet the credits to the Plant through the Collector's Department for all these charges may not have been made at the time of striking the balance, and undoubtedly were not ; for instance, in my report the Plant is credited with rent of sub-tenants \$950.01, this was found to have been collected and credited, but the Plant is also

credited with heat and power furnished to the building	\$911 28
Of which only	66 34
is collected and credited, leaving	\$844 94
still due to be collected.	

As to the other credits it would become necessary to go over them with great care in order to see if they agreed with the books of the Plant; and in doing this it would be necessary to eliminate a good many items which have nothing to do with the operation of the Plant, such as requisition for supplies of stationery, postage-stamps and stamped envelopes.

I have, therefore, made my examination independently of the Auditor's office, the system in vogue there and at the City Collector's office and the charges on the books of the Plant have been examined in the following manner: each piece of work or job was based upon a requisition from some department, stating what was required; the work was done in accordance with this requisition, and, when delivered, was receipted for on the same sheet which described the articles wanted; accompanying each requisition was a sample of the work delivered with a job ticket showing how the cost of the work was made up; this enabled Mr. Nichols to determine the value of the work in all its details upon the basis of the contract-rates which were used by Messrs. Rockwell & Churchill prior to the establishment of the Plant; therefore as each department receipted for work delivered, it didn't seem to be necessary that an investigation should be made for the purpose of proving that all these departments had been charged through the Collector's Department.

As to the expenditures given in the Auditor's report a thorough examination was made of all the vouchers, and the result is already given in this report, whereby it is shown how these have been classified and applied.

Respectfully submitted,

WM. FRANKLIN HALL,

Accountant and Auditor.

REPORT ON THE MUNICIPAL PRINTING PLANT OF THE CITY OF BOSTON.

[From March 1, 1897, to January 31, 1898.]

In the Monthly Exhibit of the City Auditor as of February 1, 1898, the total credits to the Printing Department are said to be . . . \$162,227 36

Included in these figures are :

The transfer from the preceding year of	\$40,000 00	
An appropriation of	28,800 00	
And a transfer from surplus revenue of	2,211 71	
		<u>71,011 71</u>

Deducting this amount from total credits, will leave a balance of \$91,215 65

From this amount deduct the revenue received from miscellaneous sources, viz. :

Sale of cylinder press	\$1,500 00
Sale of old material	125 00
Received for rents from sub-tenants	1,425 00
Received for running elevator	833 31
Received for heating from sub-tenants	1,202 79
Sale of stamps and postal cards	4,501 60
Sale of requisition books and stationery, which apply against City Hall	834 54

A total of	<u>10,422 24</u>
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And the difference, or \$80,793 41

represents the revenue from printing, which had been collected up to February 1, 1898, and placed to the credit of the Printing Department on the books of the City Auditor.

By the Auditor's books the disbursements on account of the Printing Department up to February 1, 1898, are \$162,227 36

To this amount add bills contracted prior to February 1, 1898, which were unpaid on that date, amounting to	7,422 23
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Pay-roll (three days) accrued to February 1, 1898	<u>620 41</u>
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<i>Carried forward</i>	\$170,270 00
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<i>Brought forward</i>	\$170,270 00
Pay-roll (three days) City Hall office, accrued to February 1, 1898	53 68
Making the total expense of this department for the year ending January 31, 1898 . . .	\$170,323 68
This is apportioned as follows :	
Operating expenses of the Printing Plant	\$110,058 12
Total cost of the Plant to February 1, 1898	43,656 03
Expenses charged to City Hall office	\$33,061 12
Less printing of all City Documents and annual re- ports for all de- partments charged to printing appro- priation	16,905 63
	16,155 49
Cash on hand, at Printing Plant, February 1, 1898	449 04
Stamps on hand at Printing Plant, February 1, 1898	5 00
	\$170,323 68

Included in the foregoing disbursements are special drafts, to the order of Thomas A. Whalen, Superintendent, the proceeds of which were used by him in the purchase of stamped envelopes, postage stamps and postal cards.

These drafts amounted to	\$10,000 00

And are accounted for as follows :

Postage billed to the different de- partments	\$5,538 55
Postage for Printing Department, Charged to Plant, with printing added	30 60
	3,976 81
Stamps in office February 1, 1898, Cash in bank February 1, 1898,	5 00
	449 04
	\$10,000 00

PLANT.

Amount paid John Cashman	\$30,000 00
Type, material, etc.	10,863 96
Office furniture	295 62
<i>Carried forward.</i>	\$41,159 58

<i>Brought forward</i>	\$41,159 58	
Carpenter work (fixtures)	1,035 67	
Electrical construction	237 28	
Moving presses	466 25	
Appraising Plant	214 00	
Safe	187 50	
Sundry bills	355 75	
		\$43,656 03
Deduct amount received from sale of old press	\$1,500 00	
Amount received from sale of old material	125 00	
		1,625 00
Valuation of Plant, February 1, 1898		<u>\$42,031 03</u>

CITY HALL OFFICE.

Charged with:		
Printing of City Documents and annual reports,	\$16,905 63	
Stamps used for office	30 60	
Pay-rolls, including salary of Superintendent to January 28, 1898	5,701 24	
Pay-rolls, accrued to February 1, 1898	53 68	
Rockwell & Churchill	3,494 76	
Postage stamps, etc.	4,501 60	
Sundry bills	2,373 61	
		\$33,061 12
Total		
Deduct revenue from sale of stamps, \$4,501 60		
Deduct revenue from sale of sta- tionery, etc.	834 54	
		5,336 14
Total of City Hall office expenses to February 1, 1898		<u>\$27,724 98</u>

OPERATION OF MUNICIPAL PRINTING PLANT.

Revenue from printing as shown by books of City Auditor and proved by books of Plant (see p. 45),	\$80,793 41	
Uncollected revenue, being charges for printing which were unpaid February 1, 1898	12,572 19	
Printing City Documents and annual reports	16,905 63	
Printing done for the "City Record" of Boston,	1,361 92	
Stamps charged departments, but not paid for on February 1, 1898	1,036 95	
Stock on hand February 1, 1898	1,587 74	
Unfinished work February 1, 1898	3,885 26	
<i>Carried forward</i>		\$118,143 10

<i>Brought forward</i>		\$118,143 10
Rents of sub-tenants to January 1, 1898	\$1,425 00	
Rents of sub-tenants accrued to February 1, 1898	316 66	
		1,741 66
Power and heat furnished to January 1, 1898	\$2,036 10	
Power and heat accrued to February 1, 1898	344 66	
		2,380 76
Total credits		\$122,265 52

EXPENSES OF OPERATION.

Pay-rolls to January 28, 1898	\$62,572 53	
Pay-rolls accrued to February 1, 1898	620 41	
Pay-rolls fireman, stenographer and over-time	857 05	
Bills for binding and ruling	15,384 40	
Bills for stock (paper)	13,465 59	
Bills for rent, repairs, supplies, etc.	12,144 38	
Government envelopes and postals to which printing was added	3,976 81	
Stamps credited above, but not paid for	1,036 95	
Total of operating expenses		110,058 12
Gain for the period ending February 1, 1898	\$12,207 40	
Deduct 10 per cent. for depreciation of Plant	4,203 10	
Net gain		<u>\$8,004 30</u>

Following the City Auditor's report the following statement shows the disposition of the revenue credited to the Printing Department outside of what was derived from printing:

The transfer from the preceding year was	\$40,000 00	
Appropriation during the year	28,800 00	
Transfer from surplus revenue	2,211 71	
Total		\$71,011 71
Value of Plant, February 1, 1898, as shown	\$42,031 03	
Total expense of City Hall	27,724 98	
		69,756 01
Showing an excess of appropriations, of		\$1,255 70
<i>Carried forward</i>		\$1,255 70

<i>Brought forward</i>	\$1,255 70
To this add the gain for the year, or	8,004 30
And also the valuation of the Plant, February 1, 1898	42,031 03
And the surplus, February 1, 1898, was	<u>\$51,291 03</u>

STATEMENT OF CONDITION FEBRUARY 1, 1898.

Assets.

Plant	\$42,031 03
Uncollected revenue	14,971 06
Cash in bank	449 04
Stamps in office	5 00
Stock on hand	1,587 74
Unfinished work	3,885 26
Rents accrued	316 66
Heat and power accrued	344 66
Total assets	\$63,590 45

LIABILITIES.

Unpaid bills	\$7,422 23
Pay-rolls, accrued, Plant	620 41
Pay-rolls, accrued, City Hall	53 68
Reserve for depreciation	4,203 10
	12,299 42
Surplus as shown above	<u>\$51,291 03</u>

Respectfully submitted,

(Signed)

WM. FRANKLIN HALL,

Accountant and Auditor.



ANNUAL REPORT
OF THE
PUBLIC BUILDINGS DEPARTMENT
FOR THE YEAR 1897.

OFFICE OF THE SUPERINTENDENT OF PUBLIC BUILDINGS,
OLD COURT HOUSE, ROOM 30,
BOSTON, February 1, 1898.

HON. JOSIAH QUINCY,

Mayor of the City of Boston :

SIR: In compliance with the ordinance relating to the Public Buildings Department, I have the honor to submit the following, which is the annual report of the Superintendent of Public Buildings :

The public buildings in charge of this department, belonging to the city of Boston, number 125, together with 2 leased buildings and 35 rooms in different buildings, variously occupied for city purposes. The City Hall is occupied entirely by the various departments and offices of the city.

The Fire Department requires for its service the use of 63 buildings, occupied as follows :

41 Engine houses.	8 Ladder-truck houses.
6 Chemical-engine houses.	1 Repair-shop.
2 Combination wagon-houses.	3 Fuel-houses.
1 Hose-house.	1 Headquarters.

The buildings in use by the Police Department number 20, 12 of which are in use for police station-houses and 3 for lock-ups ; the remaining police stations, which number 5, are in other city buildings.

This department also has charge of the City Hall (Charlestown District), Faneuil Hall and Faneuil-Hall Market-house, Charity Bureau, Old State House, and stables of the Department of Sanitary Police.

Estates numbered 37 Pemberton square, rooms in Exchange building, State street, Tremont building, and Historical building, were occupied for city offices.

The amount expended the past year for rents and taxes for outside property has been \$19,255.16.

The public buildings occupy 1,342,929 square feet of land.

The school-houses owned by the city number 199, occupying 3,969,438 square feet of land.

In addition, 38 buildings were leased for school purposes at a rental of \$25,815.62, and contained 68 school-rooms.

The Court House and County Jail are used for county purposes alone.

The Municipal District Courts number seven, and occupy rooms in city buildings in various sections of the city.

The county buildings cover 232,165 square feet of land.

The expenditure for repairs, alterations, improvements, heating, furnishing, care and cleaning, have been as follows :

Public buildings :

Public buildings	\$139,930 02
Electrical Construction Division	105,466 68
Armories	17,813 39
Architect's Division	8,902 68
Ward-rooms	6,850 92
Repairs Division	2,596 70
	\$281,560 39
County buildings	33,657 77
School-houses, public buildings	229,941 27
Public buildings, special appropriations	75,196 64
School-houses, special appropriations	302,866 97
Payments by Architect's Division	95,167 16
Total expenditures by department,	<u>\$1,018,390 20</u>

These expenditures in detail are as follows :

PUBLIC BUILDINGS.

Rents and taxes	\$19,255 16
Carpentry, lumber and hardware	10,746 13
<i>Carried forward</i>	\$30,001 29

<i>Brought forward</i>	\$30,001 29
Salaries	18,088 00
Masonry, paving and drains	2,761 26
Painting and glazing	7,423 02
Whitening and plastering	135 07
Janitor's care and cleaning	22,474 07
Plumbing	6,359 31
Gas and electric light fixtures	385 24
Gas	1,527 58
Electric lighting	12,305 30
Heating and ventilation	4,297 57
Fuel	4,543 40
Furniture	8,763 13
Roofing, gutters and conductors	2,157 58
Bells, locks and teaming	1,486 18
Iron and wire-work	801 08
Water and ice	2,897 10
Board and shoeing of horse, car, and ferry tickets, etc.	692 41
Advertising, printing, stationery, postage, messenger service and telephone	1,485 28
Auxiliary fire-alarm boxes, rental and repairs of	418 95
Awnings, new, and putting up and taking down	568 07
Supplies	2,533 16
New safe	322 00
Tablets	125 00
Elevator, repairs of	438 55
Stair-treads	1,143 00
Plans	2,500 00
City scales, pounds, etc.	169 92
Store-house labor	3,127 50
	\$139,930 02

Detail of Expenditures.

Repairs on:

City Hall	\$17,783 40
Old Court House	5,949 07
Old Probate building	4,928 79
Old State House	3,854 43
Historical building	4,444 26

Carried forward \$36,959 95

<i>Brought forward</i>	\$36,959 95
Overseers of the Poor: *	
Charity Bureau, Wayfarers' Lodge, and City Temporary Home	4,491 84
Markets:	
Faneuil Hall and Quincy	3,713 15
Storehouse, Plimpton street	3,139 10
Board of Police:	
Headquarters, Pemberton square	89 25
Fire Department:	
Headquarters, repair shop and engine- houses	495 99
Outside offices at printing plant, No. 73 Tre- mont street and 994 Washington street	1,471 81
Public Buildings. Miscellaneous:	
City Hall, Charlestown; Curtis Hall, Ja- maica Plain; Pound, East Boston; Store- house, Wareham street; House, 94 Roxbury street; Old Town Hall, Dor- chester, and Old Smith Street school- house	1,362 79
Fuel furnished at the following buildings:	
City Hall, Old Court House, City Hall, Charlestown; Curtis Hall, Building, 12 and 14 Beacon street, Faneuil Hall, Old State House, and 37 Pemberton square	4,543 40
Rents and taxes:	
37 Pemberton square, 994 Washington street, Exchange building, Lock-up, Mattapan, and parts of buildings 32 and 73 Tremont street	19,255 16
Janitors, engineers and cleaning:	
City Hall, Boston; City Hall, Charlestown; Old State House, 37 Pemberton square; Old Court House, Faneuil Hall, Curtis Hall, Milk Inspector, Old Probate Build- ing, Exchange building, 32 and 73 Tre- mont street	22,474 07
Salaries	18,088 00
Water and ice:	
City Hall, Old City Hall, Charlestown; Old Court House, Old Probate building, Faneuil Hall, Milk Inspector and Old State House	2,897 10
<i>Carried forward</i>	\$118,981 61

<i>Brought forward</i>	\$118,981 61
Gas:	
City Hall, Old City Hall, Charlestown; Old Court House, Old Probate building, Faneuil Hall, Milk Inspector and Old State House	1,527 58
Electric lighting:	
City Hall, Old Probate building, Old Court House, and 32 and 73 Tremont street	12,305 30
Supplies for janitors	2,533 16
Board and shoeing of horse, car and ferry tickets	692 41
Teaming, miscellaneous and office supplies .	3,889 96
Total	<u>\$139,930 02</u>

WARD-ROOMS.

Rents	\$3,995 80
Janitors	512 25
Carpenter-work	848 32
Heating and lighting	505 57
Plumbing, painting and masonry	464 88
Teaming, supplies, printing, stationery, etc. .	196 25
Water-rates	70 00
Gas and electric-light fixtures	101 70
Furniture	69 75
Heating apparatus	86 40
	<u>\$6,850 92</u>

Detail of Expenditures.

Ward-room	1	\$8 11
"	2	64 67
"	3	91 37
"	4	8 00
"	5	24 63
"	6	29 50
"	7	51 25
"	8	15 50
"	9	431 79
"	10	4 70
"	11	462 32
"	12	7 50
"	13	568 05
"	14	450 00

<i>Carried forward</i>	\$2,217 39
----------------------------------	------------

<i>Brought forward</i>	.	.	.	.	.	\$2,217 39
Ward-room	15	.	.	.	.	58 00
"	16	.	.	.	.	525 00
"	17	.	.	.	.	239 27
"	18	.	.	.	.	783 53
"	19	.	.	.	.	180 97
"	20	.	.	.	.	181 54
"	21	.	.	.	.	500 00
"	22	.	.	.	.	735 07
"	23	.	.	.	.	500 75
"	24	.	.	.	.	842 40
"	25	.	.	.	.	44 79
Printing	.	.	.	.	.	10 08
New voting-lists	.	.	.	.	.	10 00
New keys	.	.	.	.	.	11 17
Supplies, etc.	.	.	.	.	.	10 96
						\$6,850 92

ARMORIES.

Rents and taxes	.	.	.	.	.	\$9,560 00
Heating-apparatus, gas-fitting and plumbing	.	.	.	.	.	191 06
Furniture and furnishings	.	.	.	.	.	50 00
Fuel	.	.	.	.	.	1,695 21
Gas and electric lighting	.	.	.	.	.	862 95
Water-rates	.	.	.	.	.	181 30
Carpentry, locks and bell	.	.	.	.	.	599 83
Rifle practice	.	.	.	.	.	3,822 25
Roofing	.	.	.	.	.	214 85
Painting	.	.	.	.	.	583 64
Advertising and supplies	.	.	.	.	.	22 30
Janitor	.	.	.	.	.	30 00
						\$17,813 39

Detailed Statement.

Rents:

Headquarters First Brigade, 19 Milk street;	
headquarters Second Brigade, 37 Tremont street;	
Company A, Fifth Regiment,	
Congress Hall, Charlestown;	
Company L, Sixth Regiment, 7 Green street;	
Company D, First Battalion of Cavalry,	
Bacon's Hall; Companies A, B, C and D,	
First Corps of Cadets, 130 Columbus	
avenue	\$9,560 00
<i>Carried forward</i>	\$9,560 00

<i>Brought forward</i>	\$9,560 00
Rifle practice. Includes rent of rifle range and transportation:	
By First Corps Cadets, Naval Brigade, Cavalry Companies A and D, Fifth Regiment, Companies A and H, Ninth Regiment, Companies A, B, C, D, E and I, Signal Corps, First Brigade; Signal Corps, Second Brigade; First Brigade Staff, Sixth Regiment, Company L, and First Regiment, Companies A, C, D, G, K and L	3,822 25
Water-rates:	
First Corps Cadets, Company D, Ninth Regiment; Company A, Fifth Regiment; Company D, First Battalion of Cavalry .	181 30
Fuel:	
Armories of First Corps Cadets, Company L, Sixth Regiment; Company D, Ninth Regiment; Company D, First Battalion of Cavalry; Company A, Fifth Regiment, and headquarters of First Brigade . . .	1,695 21
Gas:	
Armories of First Corps Cadets, Company L, Sixth Regiment; Company D, Ninth Regiment; Company A and Company D, First Battalion of Cavalry; Company A, Fifth Regiment, and headquarters of First Brigade	854 05
Repairs for the following companies:	
Company A, First Battalion of Cavalry .	109 53
“ D, Ninth Regiment	322 60
“ A, Fifth “	968 25
“ H, “ “	5 18
Headquarters of First and Second Brigades .	21 22
Battery A	55 71
Ancient and Honorable Artillery Company .	156 89
Supplies, etc.	61 20
	\$17,813 39

PUBLIC BUILDINGS REPAIRS DIVISION.

Pay-roll, janitor, messenger and carpenters .	\$152 75
Iron work	76 27
<i>Carried forward</i>	\$229 02

<i>Brought forward</i>	.	.	.	.	.	\$229 02
Lumber	.	.	.	.	.	615 71
Rope	.	.	.	.	.	21 43
Stationery	.	.	.	.	.	7 54
Car tickets	.	.	.	.	.	50 00
Machinery and tools	.	.	.	.	.	1,665 83
Plumbing	.	.	.	.	.	7 17
						\$2,596 70

ARCHITECT'S DIVISION, OFFICE EXPENSES.

Salaries	.	.	.	.	.	\$7,613 05
Typewriting	.	.	.	.	.	77 70
Board and shoeing of horse, repairs of carriage, etc.	.	.	.	.	.	721 49
Printing, stationery, postage and blue prints	.	.	.	.	.	156 55
Telephone	.	.	.	.	.	162 95
Car fares	.	.	.	.	.	75 00
Drawing materials	.	.	.	.	.	95 94
						\$8,902 68

COUNTY BUILDINGS.

Janitors' care, cleaning	.	.	.	.	.	\$3,959 88
Furniture and furnishings	.	.	.	.	.	1,950 27
Electric light	.	.	.	.	.	6,299 29
Fuel	.	.	.	.	.	5,298 43
Gas	.	.	.	.	.	909 90
Carpentry	.	.	.	.	.	2,088 99
Heating apparatus	.	.	.	.	.	1,607 00
Printing	.	.	.	.	.	35 35
Teaming and supplies	.	.	.	.	.	1,046 00
Elevator repairs	.	.	.	.	.	129 40
Painting and glazing	.	.	.	.	.	590 65
Care of lawns	.	.	.	.	.	618 49
Masonry and paving	.	.	.	.	.	1,240 16
Roofing, iron and wire-work	.	.	.	.	.	412 54
Gas and electric fixtures	.	.	.	.	.	926 81
Locks and keys	.	.	.	.	.	123 65
Water and ice	.	.	.	.	.	1,688 60
Telephone system, Court House	.	.	.	.	.	990 00
Plumbing	.	.	.	.	.	3,742 36
						\$33,657 77

Detail Statement.

Court House.	.	.	.	.	.	\$23,222 87
Municipal Court, Roxbury	.	.	.	.	.	1,725 88
“ “ Dorchester	.	.	.	.	.	921 23
“ “ Charlestown	.	.	.	.	.	987 63
“ “ East Boston	.	.	.	.	.	1,158 44
“ “ South Boston	.	.	.	.	.	1,628 55
“ “ Jamaica Plain	.	.	.	.	.	454 95
“ “ Brighton	.	.	.	.	.	945 89
County Jail	.	.	.	.	.	2,235 23
Supplies	.	.	.	.	.	377 10
						\$33,657 77

SCHOOL-HOUSES, PUBLIC BUILDINGS.

Furniture	.	.	.	.	.	\$49,371 07
Carpentry, lumber and hardware	.	.	.	.	.	34,981 33
Heating apparatus	.	.	.	.	.	29,711 36
Ventilation	.	.	.	.	.	10,483 31
Masonry, paving, drains, etc.	.	.	.	.	.	12,075 09
Rents:						
High School, military drill	.	.	.	.	.	\$450 00
Grammar Schools	.	.	.	.	.	4,112 50
Primary Schools	.	.	.	.	.	12,965 45
Evening Drawing Schools	.	.	.	.	.	1,156 00
Kindergartens	.	.	.	.	.	4,931 67
Manual Training	.	.	.	.	.	2,200 00
						25,815 62
Painting and glazing	.	.	.	.	.	14,766 83
Whitening and plastering	.	.	.	.	.	3,754 90
Blackboards	.	.	.	.	.	3,352 59
Locks, keys and electric bells	.	.	.	.	.	2,399 18
Roofing, gutters and conductors	.	.	.	.	.	5,485 93
Iron and wire-work	.	.	.	.	.	2,250 84
Fire-escapes	.	.	.	.	.	229 50
Sash-elevators	.	.	.	.	.	352 97
Plumbing	.	.	.	.	.	11,114 51
Gas-fitting and electric-light fixtures	.	.	.	.	.	5,205 31
Teaming	.	.	.	.	.	1,178 00
Cleaning buildings and supplies	.	.	.	.	.	629 94
Horseshoeing, board of horses, repairs of carriages and harnesses	.	.	.	.	.	909 41
Salaries	.	.	.	.	.	5,697 50
Printing, stationery and postage	.	.	.	.	.	333 79
Rent and care of auxiliary fire-alarm boxes	.	.	.	.	.	3,156 64
<i>Carried forward</i>	.	.	.	.	.	\$223,255 62

ARCHITECTURAL DIVISION,

BOSTON, February 1, 1898.

Col. FRED. B. BOGAN,

Supt. of Public Buildings, Boston :

DEAR SIR: All of the buildings under contract and in process of erection at the time of the abolition of the Architect Department, July 1, 1895, have been completed with the exception of the Surgical Building, City Hospital. On this construction there have been numerous tedious delays but it is hoped that by April 1, next, the work will be completed and the building used for hospital purposes.

During the past year, this division has performed the following architectural work for different departments of the city, most of which has been completed or will be within a very short time :

Alterations, piping, boiler-house, City Hospital	\$5,654 99
Alterations, Cudworth School, East Boston	911 23
Alterations, tender's house, Essex street, Brighton	500 00
Alterations, Water Board stable, Albany street, ...	10,746 54
Alterations, water tower, East Boston	1,393 33
Alterations, dome, etc., City Hall	30,421 95
Alterations, steam mains, Boston City Hospital	1,222 00
Alterations, ward-room, Ward 19	5,000 00
Alterations, ward-room, Ward 17	6,200 88
Alterations, ward-room, Ward 7	5,327 91
Alterations, plumbing, Charity Building	4,150 00
Alterations, boiler-setting, Parental School	2,920 00
Design for coal-pocket, City Hospital	25,338 00
Design for sanitary, Chestnut Hill	1,348 00
Design for band-stand, North End Park	500 00
Grading, Stoughton District, Grammar School, ...	2,090 00
Painting, City Hall corridors	1,957 00
Total	<u>\$105,681 83</u>

As most of the above work is in the nature of alterations and as this work is charged for at the rate of 10 per cent. on total cost of the work, the saving to the city on account of architectural commissions would be approximately \$10,000.

For the different departments of the city of Boston there has been performed the following work :

City Messenger Department.— Plans were furnished for movable iron band-stand and also for movable iron review-

ing-stand, to be erected on certain occasions in front of City Hall yard.

Cemetery Department. — Plans and specifications and perspective drawing were furnished at the request of the chairman of this department for a gate lodge, chapel, etc., to be erected at Mt. Hope Cemetery. Estimates of costs were also furnished.

Engineering Department. — On account of property being damaged, through change in grade of Gold street, South Boston, this division was asked to make an examination of the damaged properties, and furnish estimates for repairs to the same.

Health Department. — Complete drawings and specifications have been furnished the Board of Health for the alteration of the morgue building, North Grove street, and estimates have been furnished for the work.

Hospital Department. — This division is still superintending the completion of the Surgical Building, which will be finished in a short time.

This division has been consulted repeatedly by the Trustees on matters pertaining to the heating and ventilating of the old buildings, and on minor architectural matters, and drawings have been furnished and the same followed.

At present the office is engaged in laying-out and furnishing working drawings for the proper heating and ventilating of the new Laundry Building and the new Nurses' Home.

This work alone will result in a saving to the city of approximately \$2,000.

Institutions Department. — A complete set of plans and specifications were furnished the commissioner for the construction of boiler-house and chimney at Deer Island. The work was performed by inmates.

Various drawings have been furnished relative to changes intending to be made on different buildings under the charge of this department.

Different schemes have been worked up for the Trustees for Children, showing arrangements for new dormitory building.

Park Department. — A sheepfold was designed, to be erected at Franklin Park, and a complete set of drawings and specifications furnished. An approximate cost of this structure was \$12,000.

This office has been consulted by the Secretary of this Board at various times, on matters pertaining to buildings.

Estimates have been furnished them for the cost of different buildings to be erected at Franklin Park.

Drawings have also been furnished them, showing possible enlargement of bathing-closet space at Marine Park, South Boston.

Public Buildings Department.—The drawings for the usage of the Massachusetts Historical Society building as an office building for city offices were practically completed by this division, and the system of heating and ventilating the same were worked out.

Drawings have been made, showing practicability of utilizing Old Court House as a part of City Hall.

Various plans have been drawn, showing different arrangements of offices in Old Court House.

When it was contemplated some months ago to put the old Faneuil Hall building in proper repair, this office carefully measured and worked out complete drawings of this building, and a proper system of heating and ventilating and refrigerating for the market part were designed. This old structure had never been measured before, and, as no plans could be found anywhere, this work in itself will prove valuable. The estimated cost of the alterations was in the neighborhood of \$124,296. The architectural commission alone on the perfecting of drawings, etc., would be about two per cent., or \$2,485.

Public Grounds Department.—Estimates have been furnished by this division for the cost of beautifying Copley square.

Street Department.—Plans and specifications, together with estimate for the erection of veterinary hospital at South Yards, has been furnished to the Superintendent. The plans also met with the approval of their veterinary surgeon.

A complete set of plans and specifications have also been furnished the Superintendent for the alterations of the stable and buildings in the Child-street yard, Jamaica Plain.

Plans were also furnished for alteration of stable at West City yard, and the work was done under the direction of the Street Department. The same is also true of plans furnished for the construction of an office building at the Charlestown yard.

All the preliminary studies for new ferry head-house for South Ferry, East Boston side, were worked out by this office and submitted to the Superintendent of Ferries.

This division has also been consulted by the different deputies of the Street Department on architectural matters.

Water Department.—Complete plans and specifications were furnished the Water Commissioner for the construction of an office building at Ashland, Mass. Estimates of cost were also sent to him.

The above department was also advised of the necessary alterations in the Mt. Bellevue water-tower and plans furnished.

On other subjects the Water Commissioner has sought this office for advice.

This division has also been asked, both by His Honor the Mayor and by the different heads of department, to investigate and report on certain matters, among which may be mentioned:

Condition of engines, boilers, etc., printing plant.

Condition of entire Street Department buildings.

Condition of plumbing and heating, Marcella-street Home.

Condition of plumbing, Charity Building.

Condition of garbage plant, Gibson street, Dorchester.

Condition of dredging plant, Whitehall pond.

Condition of heating apparatus, R. G. Shaw School.

Condition of heating apparatus, S. M. Weld School.

Condition of heating apparatus, Hugh O'Brien School.

Condition of heating apparatus, Hyde School.

Condition of heating apparatus, Martin School.

Condition of walls and ceilings, Charity Building.

Condition of floors, etc., Quincy Market.

Expert services. — Under the directions of the Consulting Architect, Prof. F. W. Chandler, this office has carefully gone over all plans and specifications prepared for the construction, heating and ventilating, and plumbing of all the different buildings designed to be erected by the city during the past year, and suggestions have been made, which in most cases have been followed, and have also carefully checked up all orders of additions to or deductions from the different contracts on buildings now in process of erection, and in many cases a considerable saving of money to the city has resulted.

The plans and specifications for the improvement of the heating and plumbing of different schools, to be taken care of under the special loan of \$300,000, were also gone over by this division.

A table showing the balance of appropriations, February 1, 1898, said appropriations having been turned over to this department at the time of the abolition of the Architect Department, said table also showing amount of additions to, or deductions from said contracts, bills which have been paid, and payments on contracts, is herewith appended:

NAME.	Balance of Ap- propriation, Feb. 1, 1897.	Additions to Contracts.	Bills Paid.	Payments on Contracts.	Balance of Ap- propriation, Feb. 1, 1898.	REMARKS.
Brighton High School	\$1,965 70				\$1,965 70	
Grammar Sch.-ho., Bowdoin Dist. . . .	281 64	⁴ \$104 47	\$138 35	\$4,150 91	247 76	
Grammar Sch.-ho., Stoughton Dist.,	1,385 03	453 28		2,065 83	1,349 75	
Grammar Sch.-ho., Mt. Vernon Dist.,	28 30				² 28 30	
Grammar Sch.-ho., North Brighton..	27 31				² 27 31	
Primary Sch.-ho., Emerson Dist. . .	129 89				² 129 89	
Primary Sch.-ho., Genesee st.	6,272 18		¹ 1,126 42	20 62	² 5,145 76	
Primary Sch.-ho., Morton st.	323 99				² 323 99	
Primary Sch.-ho., Canterbury st. . .	818 49		¹ 128 11		² 690 38	
Mechanic Arts High School	3 42				² 3 42	
Fire Dept. Bldg. & Site, So. Boston,	79 92				79 92	
Mechanic Arts High Sch., Furnishing,	157 74		¹ 157 74			
New Lunatic Hos- pital	2,358 08	11,870 79	⁶ 1,428 50	44,000 00	³ 10,941 21	
New Buildings, City Hospital...	43,697 96	⁵ 45,388 59	13,519 80	31,271 65	³ 4,978 70	

¹ Expended by School Committee.² Transferred to Appropriation School-houses, improvements in.³ Deficit.⁴ Deduction.⁵ This amount includes contracts let during the year.⁶ Expended by Institutions Commissioner.

ELECTRICAL CONSTRUCTION DIVISION,
11 WAREHAM STREET,
BOSTON, February 1, 1898.

Col. FRED. B. BOGAN,

Superintendent of Public Buildings:

DEAR SIR: I present herewith a report of the business done by the Electrical Construction Division for the year ending January 31, 1898.

Balance Sheet. — Dr.

By stock on hand February 1, 1897 . . .	\$4,844 75
By accounts on hand February 1, 1897 (un- finished work)	7,180 10
By expenditures for materials	66,236 14
By expenditures for labor	39,230 54
By labor paid direct from City Hospital ap- propriation	6,003 98
	\$123,495 51

Cr.

By bills submitted for collection	\$84,533 07
By accounts on hand January 31, 1898 (un- finished work)	15,273 22
By stock on hand January 31, 1898	11,664 37
By labor paid direct from City Hospital appro- priation	6,003 98
Expenses of this Division	6,020 87
	\$123,495 51

Expenditures to January 31, 1898.

Stock and materials charged to Public Build- ings Appropriation	\$66,236 14
Labor charged to Public Buildings Appropria- tion	39,230 54
Labor paid direct by City Hospital	6,003 98
	\$111,470 66

Detailed Statement of Expenditures.

Materials:

To stock, wire cables, etc.	\$21,562 64
Printing and stationery	675 75

Carried forward \$22,238 39

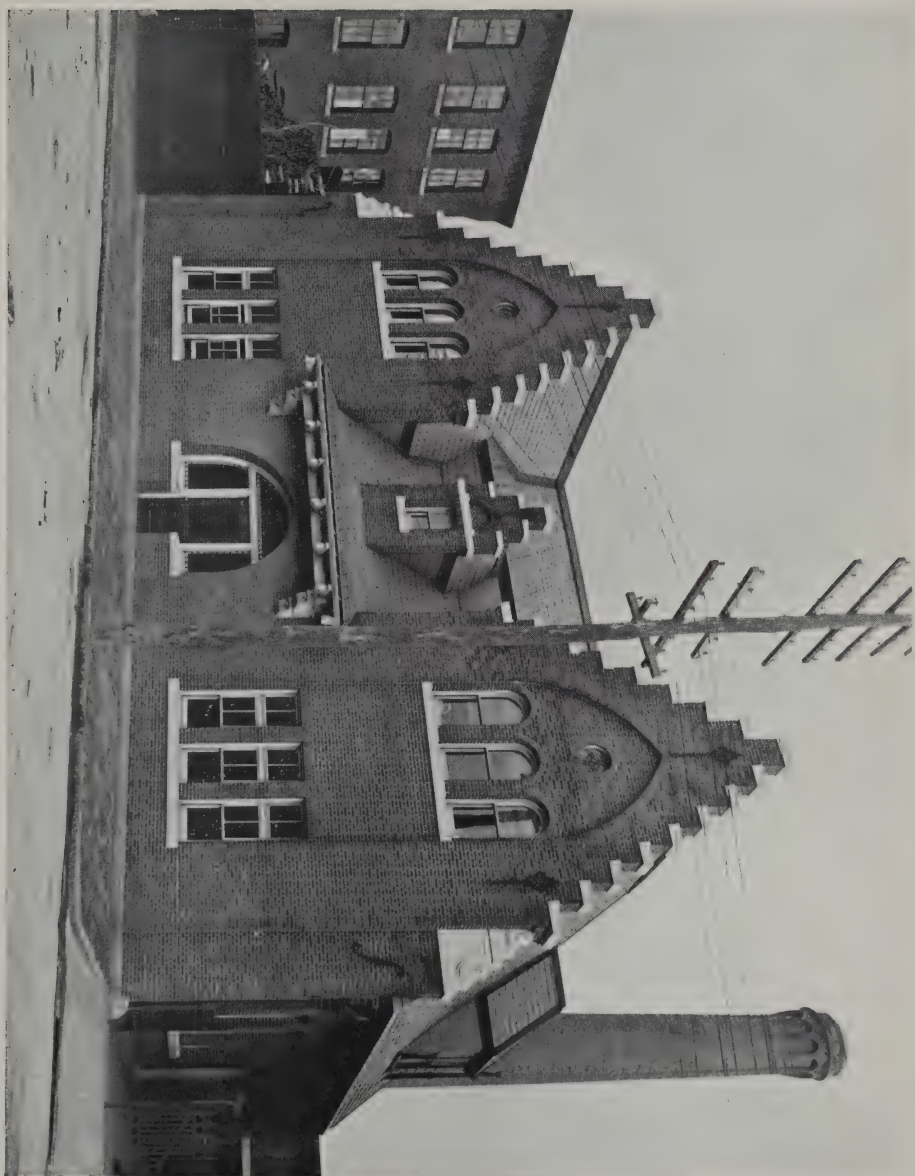


FIG. 1.—EXTERIOR OF POWER-HOUSE.

<i>Brought forward</i>	\$22,238 39
Electric fans	139 00
Gas and electric fixtures	4,629 08
Carpenter work and stock including all mouldings and hardware	2,496 42
Electric lighting	33 38
Car and railway fares	1,585 50
Telephone service	311 90
Teaming	468 01
Typewriting	195 51
Blue prints	25 51
Iron-work and general supplies	8,767 15
Mason-work	3,634 09
Motors	251 45
Horse-keeping, carriages, etc.	1,008 60
Electric light plant, engines, etc.	13,028 00
Telephones and fixtures	1,967 52
Dynamos	5,331 82
Painting and glazing	93 58
Steamfitting	11 23
Expert services	20 00
	\$66,236 14
Labor charged to Public Buildings Depart- ment.	39,230 54
Labor paid direct by City Hospital	6,003 98
	<u>\$111,470 66</u>

Detailed Statement of Receipts.

For work in the different departments chargeable to Public Buildings Department:

Ward-room 9	\$89 09
Ward-room 19	68 90
Sealer Weights and Measures	11 39
Building Commissioners	57 60
Health Department	1 88
Clerk of Committees	92
Law Department	14 10
Probate Building	548 78
City Treasurer	395 34
Lamp Department	106 44
Aldermen's Chamber	60 72

<i>Carried forward</i>	\$1,355 16
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<i>Brought forward</i>	\$1,355 16
Printing Department	42 92
Election Commissioners	23 63
Wire Commissioner	102 72
Room No. 30, Old Court House	83 96
City Clerk	39 40
Street Department	20 51
City Messenger	169 86
City Auditor	8 59
Room No. 8, City Hall	4 72
Common Council Chamber	62 28
Water Board	16 74
City Collector	76 74
Mayor's office	862 44
Assessors' office	133 59
Street Commissioners	269 92
Electrical Construction Division	82
Milk Inspector	3 96
Tremont Building, Street Department	25 08
Overseers of the Poor	96 39
Storehouse, Plympton street	662 87
30 and 32 Tremont street	1,211 30
Elevators, City Hall	129 64
Document room, City Hall	158 59
Dome, City Hall	46 07
Engine-room, City Hall	22 76
City Hall, Old Court House, corridors and miscellaneous work,	64 61

\$5,695 27

For work chargeable to departments:

Public Institutions	\$7,973 27
City Hospital	29,150 71
Water Department	823 32
Public Grounds	208 48
Election Commissioners	5 86
Police Commissioners	70 02
School Committee	2,945 16
Improvements in City Hall	192 08
Reconstruction, basement of Old Court House	35 01
City Engineer	627 04
Street Commissioners	534 76
Superintendent of Streets	7,416 44
Superintendent of Printing	257 63

Carried forward . . . \$50,239 78

\$5,695 27

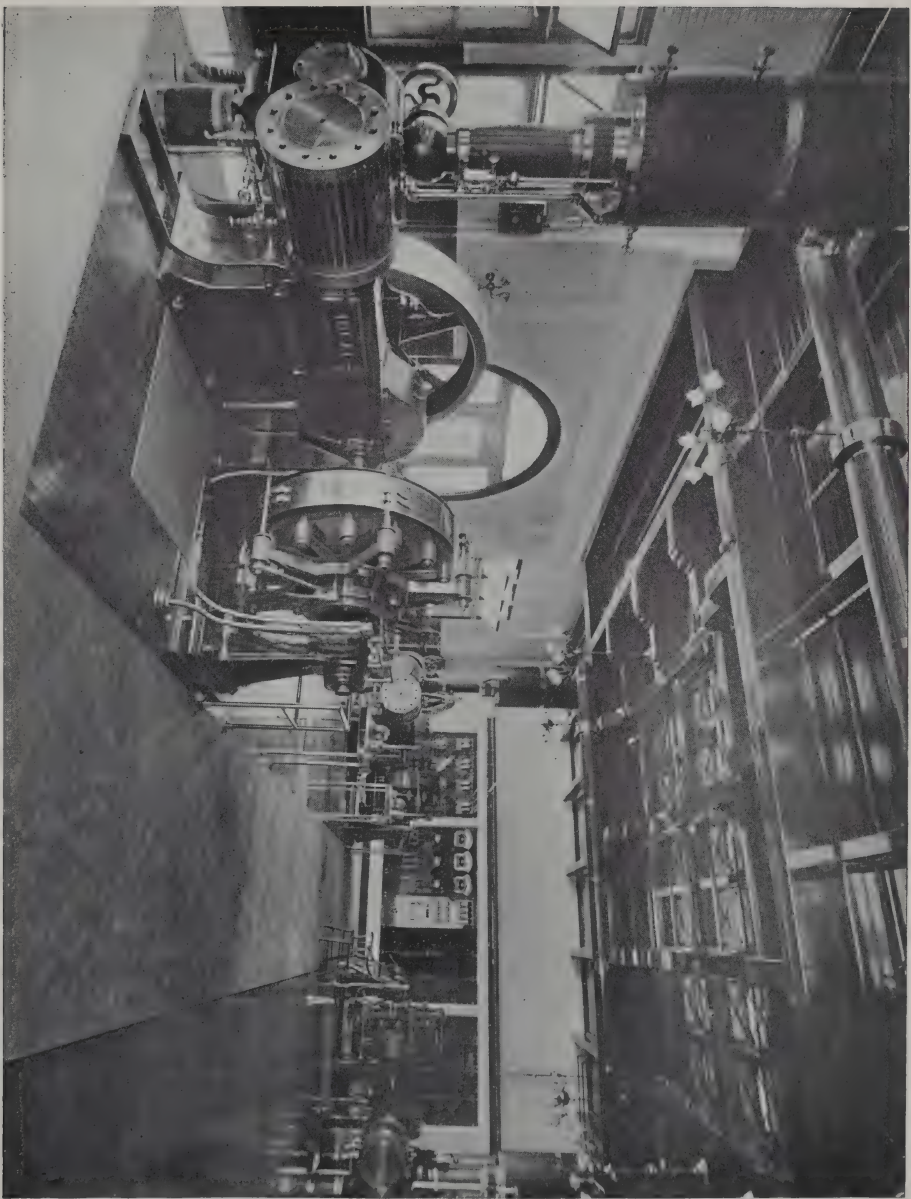


Fig. 2.—ENGINE AND DYNAMO-ROOM.

<i>Brought forward</i>	.	.	\$50,239 78	\$5,695 27
Park Commissioners	.	.	5,252 96	
State armories	.	.	11,638 94	
City Collector	.	.	138 27	
Ward-room 19	.	.	562 71	
Ward-room 17	.	.	892 76	
Markets	.	.	121 07	
Overseers of the Poor	.	.	3,382 68	
B. F. Sturtevant & Co. (South Armory)	.	.	20 63	
Public Library	.	.	203 91	
Fire Department	.	.	4,399 73	
Dome, City Hall	.	.	1,825 77	
City Messenger	.	.	158 59	
			— — — — —	78,837 80
Stock on hand	.	.		11,664 37
Accounts on hand (unfinished work)	.	.		15,273 22
				<u>\$111,470 66</u>

The sum of \$29,742.77 has been expended for work authorized by and charged to special appropriations, of which amount \$26,676.10 is charged to special appropriations for City Hospital Electric Light Plant, and \$3,066.67 to special appropriation for Electric Light Plants for ferry-boats.

The sum of \$15,000 was estimated to cover cost of work to be done for Public Buildings Department, and the expenses of this division for the year 1897. Of this amount \$5,336.66 has been expended for Public Buildings (see previous statement), and \$6,020.87 is charged to expenses of this division leaving a balance of \$3,642.47.

The item of \$6,020.87 for expenses of this division covers our office expenses and inspections of wiring and apparatus throughout the city. These inspections have proved to be of great benefit, in keeping the city's electrical property in safe and proper condition. The city now owns and operates fifteen (15) electric light plants, details of which are given elsewhere, and represent an approximate valuation of \$181,200. This sum representing only the engines and electrical apparatus with the exception of the Deer Island Plant which covers boiler and building. To this should be added the electrical equipment supplied with current from the various illuminating and power companies, and also the private telephone and bell equipments which bring the estimated total up to \$300,000 not including the fire-alarm and police-signal system.

The importance of giving this apparatus the best possible care can be readily seen when due consideration is given to the fact that the use of electricity in some form now enters into the equipment of nearly every building, and that while under reasonable care it is one of the safest forms of energy known to science, it is also true that unless properly installed and cared for it is a constant source of danger.

Much has been accomplished during the past year in the way of investigating and gathering information relative to the city's electrical property, and I would recommend that the work be continued during the ensuing year, as the service can be made of great value to the various departments operating electric plants and apparatus by furnishing them reliable reports from time to time showing what defects exist and at what efficiency their plant is being operated; also any faults of management. I would also recommend that records be kept with a view to learning, if possible, the cost of operating isolated plants. Such records are very scarce and at this time when there is so much argument regarding the advisability of municipal lighting plants the facts are particularly desirable.

During the past year this division has furnished electrical supplies to the various departments to the amount of \$4,407.54.

The division has been badly handicapped by lack of room in which to conduct its business and handle its stock, but it is expected that by April 15 the new stock-room and office in the Old Armory Building, No. 11 Wareham street, will be completed and occupied.

The following descriptions of the principal plants designed and installed by this division since its organization (May, 1896) may be of interest, and prove conclusively that the city of Boston is no longer neglecting to adopt that which other large cities have so long found indispensable, and that greater economy and a much better class of work can be secured by doing the work under its own management.

In making this statement I do not claim that we can enter into competition with contracting firms doing work under their own specifications which means using the cheapest materials and labor.

There is no economy in such construction, as the cost of maintenance and repairs more than offsets the difference in cost of good construction, which can only be accomplished by the use of good materials and first-class labor, both of which it has been my aim to secure.

Yours respectfully,

H. F. COTTLE,

Chief of Electrical Construction Division.

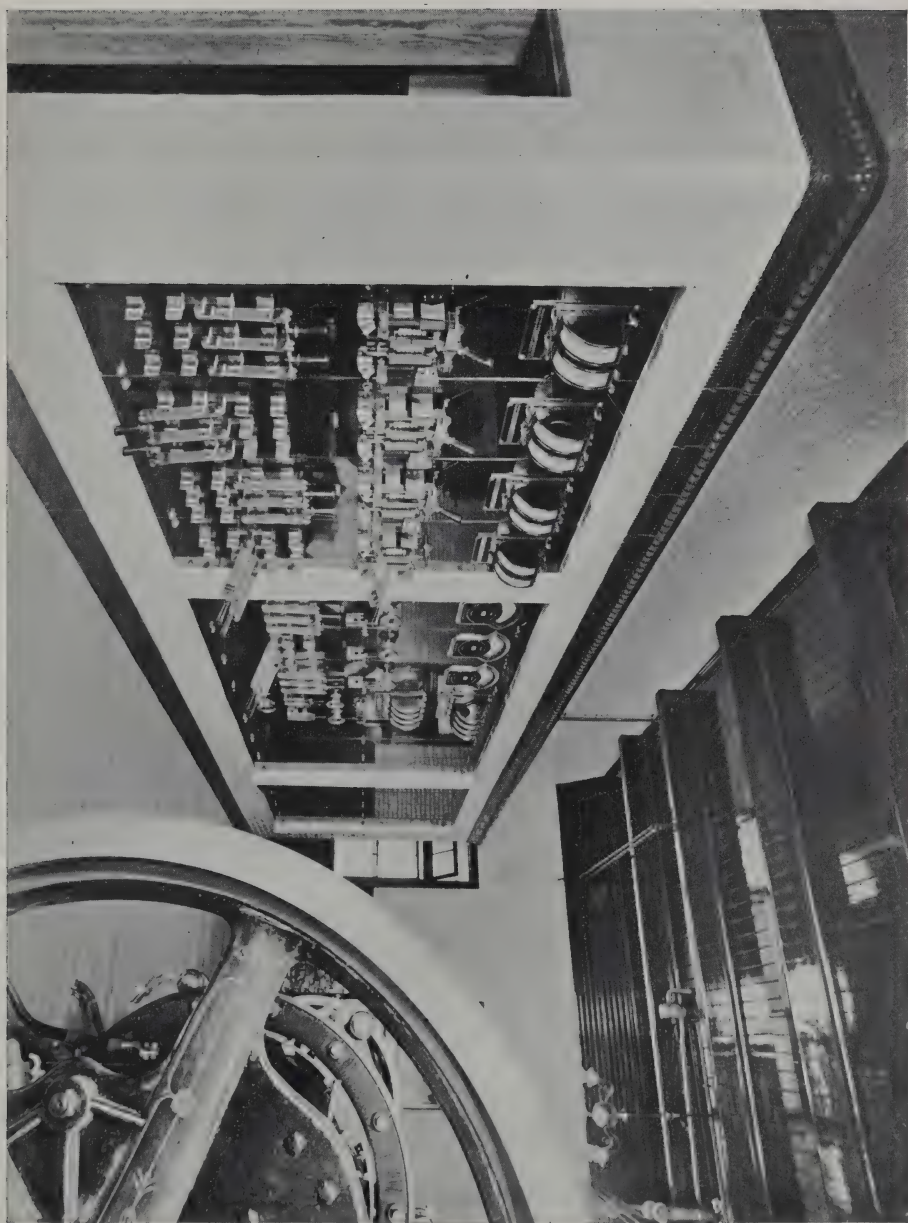


Fig. 3.—SWITCHBOARD.

BOSTON CITY HOSPITAL.

This plant, which is considered to be one of the finest in this country, was completed October 14, 1897, and has since been running without mishap of any kind. The plant is located in the new power-house, shown in Fig. 1, situated on the easterly side of Albany street, directly in the rear of the hospital grounds, a plan of which is shown in Fig. 2. The head-house facing on Albany street is 60 by 40 feet and is built of red brick with marble trimmings, from designs by Mr. Edmund M. Wheelwright.

The head-house, marked 21 in Fig. 4, contains the engines and dynamos, while the boilers are installed in a boiler-house, 60 by 50 feet, marked 20 in Fig. 4, in the rear of the head-house, with a tank-room annexed. The stack is of brick, 100 feet in height and five feet inside diameter. The boiler-plant, consisting of six horizontal tubular boilers of 125 h p., each was installed about three years ago and used until recently for heating purposes only. In the rear of the boiler-room is a coal pocket of about 3,500 tons capacity, into which the coal is unloaded directly from the vessel by means of a Hunt conveyor.

Steam is conveyed to the engine-room through a steam main, 12 inches in diameter, with suitable valves to admit live steam into the heating system when necessary.

The engine-room, shown in Fig. 2, is designed for six direct connected units, three of which have been installed. Each unit consists of a 17-inch by 14-inch "Ideal" automatic self-oiling engine, direct connected to an 80 Kilowatt, 220 volt, Siemens & Halske generator. The engines, which run at a speed of 250 revolutions per minute, are designed to operate with an initial steam pressure of 85 lbs., and under a back pressure of 15 lbs. to the square inch, in order to utilize the exhaust steam for heating purposes. This large back pressure is due to the long distances that steam has to be carried in the heating mains. When the steam is not required for heating it is passed through a Berryman feed water-heater and then discharged into the atmosphere. Each engine is piped up with a Stratton separator, and the exhaust steam is passed through an oil separator before entering the heating system. The various steam and recording gauges and clock are mounted on a gauge-board of Tennessee marble.

The switchboard, shown in Fig. 3, is 28 feet in length, and consists of 15 panels of polished black Monson slate, mounted in a white enameled brick setting and topped with an effective cornice. It is arranged in three sections, the

central one of seven panels being used for the generators, and two end sections, each of four panels, which are for the feeders. The central panel carries the switches and rheostat for controlling the motor generator, which is used for balancing the three-wire system and also the volt and ammeters for each side of the system, also showing the total load on the system and on the neutral bus.

Each of the three generator panels is equipped with a 3-pole 500-ampere knife switch, a field switch and rheostat and an illuminated dial ammeter. Each feeder panel has mounted upon it a 500-ampere double throw knife switch and an edgewise ammeter in each side of the system. Each feeder is provided with a double-coil double-pole I. T. E. circuit breaker, so arranged that an overload between the neutral and either outside pole will open both sides of the system, thus avoiding an excessive load on the motor generator. All safety fuses are mounted on independent slate bases and installed in the rear of the board, where ample space is provided for access. In case of accident to the plant, one or all of the feeders can be thrown on to the street service by reversing the feeder switches, thus making the hospital absolutely sure of service. The walls of the engine and dynamo-room are finished in enameled brick, and the floor is of polished birch and the ceiling paneled. A heavy nickel-plated railing separates the visitors' entrance from the main floor, and affords ample opportunity for viewing the plant without interference with the employés. There are also nickel-plated guard-rails around the engines and generators. A telephone booth, with inter-communicating telephone, connecting with every part of the institution, is also located in the engine-room.

On account of the large area covered by the institution it was found desirable to use the three-wire system, and this is accomplished by running the generators at 220 volts and balancing the neutral wire by means of a 5 K. W. four-pole Siemens & Halske motor generator.

There is also a small auxiliary switchboard in the rear of the main switchboard by which the lights in the power-house and stable adjoining can be transferred to either side of the system in case the system gets out of balance beyond the capacity of the motor generator. As a matter of fact the system is so well balanced that the motor generator takes care of the variations with ease.

From the power-house there are run out four sets of feeders (shown by dotted lines in Fig. 4), dividing the grounds into four sections, the south or contagious departments, the easterly

end of the old yard, and the medical and surgical sides of the old yard. The various buildings of the institution are connected by ducts for heating pipes and other purposes, and it was the original intention to run the electrical feeders through these ducts, but it was found inadvisable in some places on account of the heat and dampness, so special conduits have been laid across Albany street and Massachusetts avenue. These conduits consist of three-inch steel pipes laid in concrete. Inside the grounds the feeders are carried through the subways on special porcelain insulators bolted to the tops and sides of the subways. At the end of each feeder is a special slate distributing board controlling each circuit. From these distributing boards the mains are distributed to the various wards and buildings. These distributing boards are so arranged that should the system become unevenly balanced the branch circuit connections can be reversed to even up the load. Provision is also made for tying together two or more feeders in case of accident. The wiring loss from switchboard to lamps is figured at five volts. The wiring of the wards and other buildings is done in mouldings, except in the new buildings, in which iron-armored conduit is used. All cut-outs are located outside the wards. There are at present connected to the plant about 4,000 lamps and two motors, but it is intended to extend the use of electricity into many of the branches of hospital service, for which it is so well adapted.

The entire plant has been designed and installed from plans and specifications prepared by this Division, with the single exception of the steam-fitting which was already under the supervision of the Architectural Division. The original appropriation for the work was \$40,000 and was based on a bid made by a firm of electrical contractors, in accordance with plans and specifications prepared by Messrs. Stone & Webster of this city. As the plans contemplated an entirely different system, and as it was also found necessary to lay new conduits as previously mentioned, and also to allow for greater back pressure on the engines and capacity for increasing the plant to meet the growth of the hospital, the sum of \$10,000 additional was allowed, and the work has been completed within the specified amount. Up to the present time no definite figures have been obtainable relative to the cost of operating the plant, but it is the opinion of those in charge of the plant that the consumption of coal and water has increased but very little over that used for heating alone since the plant was started. During the summer months when the exhaust steam is not used for heating, the differ-

ence will probably be more noticeable, but indications seem to point to a highly economical plant. As previously stated it is our intention to procure figures relative to the cost of operation during the ensuing year.

HOUSE OF CORRECTION, DEER ISLAND.

The installation of this plant was begun in August, 1896, and that portion now installed was completed in February, 1897. The plant is located on the north-easterly end of the island, and consists of a substantial brick head-house 30 by 40 feet, with brick boiler-room 40 by 40 feet adjoining it in the rear. The stack is 100 feet in height by 5 feet inside diameter. The building was built by prison labor under the direction of Superintendent Gerrish.

The plant was designed for four boilers and four engines sufficient to light the entire institution, but only one boiler and one engine have been installed to date. The boiler installed is a Campbell-Zell Improved Water Tube safety boiler, tested for 200 pounds steam pressure and guaranteed to develop 120 h.p. As the firing is all done by prison labor which cannot be expected to be skilled or responsible to any extent, the use of a boiler of this type was almost compulsory, notwithstanding the increased cost, and subsequent experience has demonstrated the wisdom of the choice.

The engine is a 12-inch by 14-inch McEwen simple engine, direct connected to a 75 K. W. Thomson Ryan Dynamo, running at 275 R.P.M. The exhaust steam is passed through a National Feed Water-Heater and thence to atmosphere. Back pressure valves were provided so that the exhaust steam might be utilized in heating the new cell-house near by, but up to the present this has not been done. All piping throughout the plant is temporary, as it was not considered advisable to put in permanent piping until the balance of the plant is completed. This is also true of the switchboard which is also temporary. The feed-pump, injector, feed-water heater and back pressure valve are permanent and large enough for the entire plant. Foundations are also in place for the balance of the boilers and engines. The dynamo installed is of a new type, and its operation has been watched with considerable interest by electricians. Tests made by Mr. Chas. E. Davis, C. E., indicate that the dynamo does all that is claimed for it, and that it is a thoroughly reliable machine, absolutely free from sparking under any load and with the brushes in fixed position.



EXTERIOR OF POWER-HOUSE, DEER ISLAND.

At present there are about 1,000 incandescent and two arc lamps connected to the plant; 650 of the above being in the new cell-house and 250 in the hospital, and fifty in the main institution building. The hospital and cell-house are connected with the power-house by lead-covered cables drawn into underground conduits. The lights in the main institution are reached by overhead wires.

The wiring in the new cell-house is done in plain iron pipes, and was the first building in Boston to be equipped in this manner, which has since been generally adopted as a standard method.

There is urgent need of a duplicate equipment for the power-house, for while there has never been any serious interruption to the service, such interruptions should be provided for, both on account of safety and economy. At present it is necessary to keep the apparatus in condition to run at all times, thus leaving no opportunity to make repairs or proper inspection. In case of failure of any portion compelling the plant to shut down, the new cell-house will be without light, and as the building contains about 500 prisoners the effect of leaving it in darkness can be readily seen. Another boiler, engine and dynamo should be added at once, to be used as a reserve outfit.

There is also urgent necessity of lighting the women's dormitory, which is now lighted by kerosene lamps. No additional machinery need be installed for this purpose, there being capacity enough in the present plant.

LONG ISLAND ALMSHOUSE.

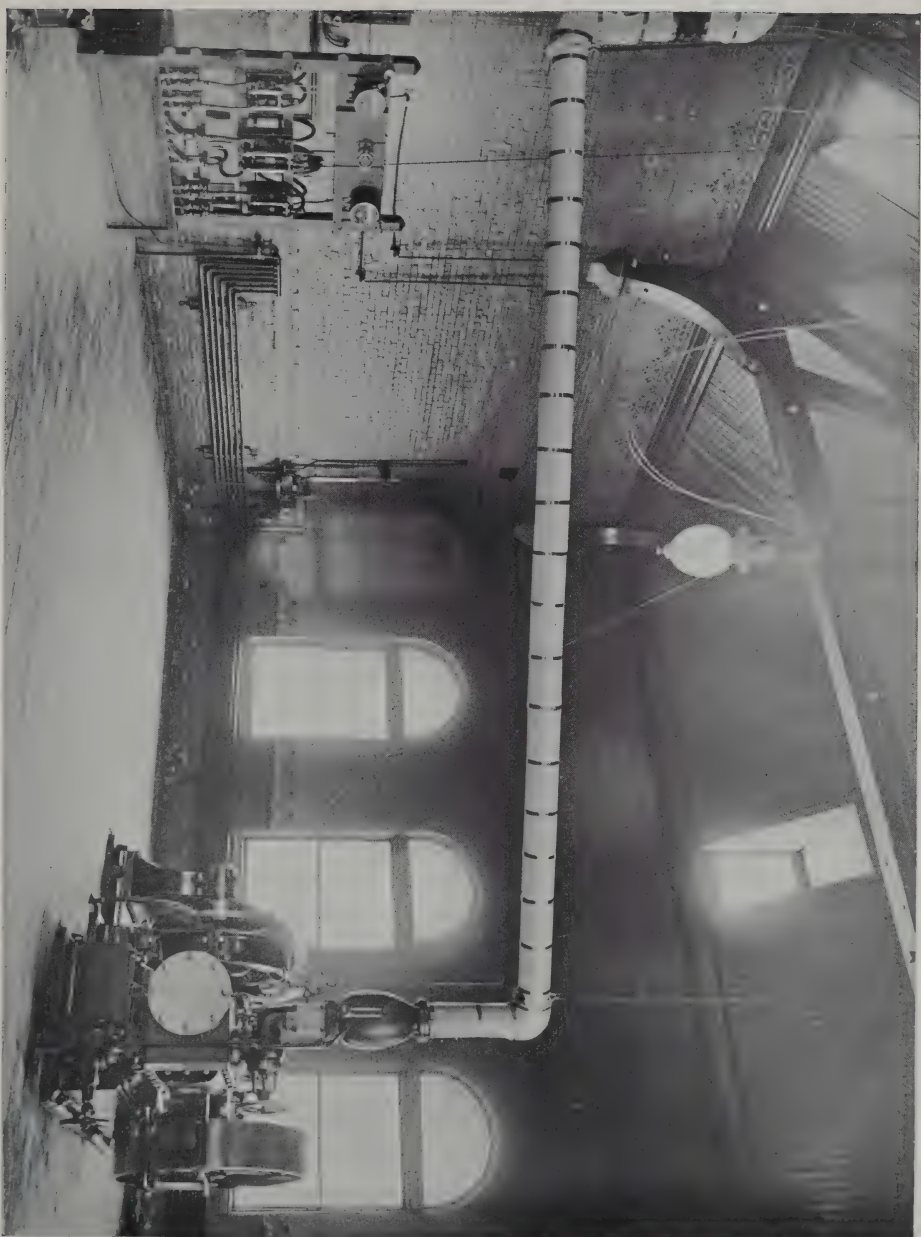
This is an old plant installed several years ago and added to from time to time until it is now badly overloaded and in danger of collapse. Shortly after this division was organized our attention was directed to a report made by the Wire Department concerning the dangerous condition of the wiring.

An examination verified the above report and work was at once commenced to make the plant safe. All the defects in wiring reported have now been corrected and a fire-alarm system installed as recommended. So far as the wiring is concerned the plant is now in good shape, but the plant is badly overloaded beside being poorly situated. I advise the removal of the engines and dynamos to a clean, dry place above grade, and the addition or substitution of apparatus of sufficient capacity to handle the load and any additions likely to be made in the future.

FERRY-BOATS.

During the past year electric lighting plants have been installed on ferry-boats "Winthrop," "D. D. Kelly," and "Revere." The plants have a capacity of 100 lights each, and consist of 8 inches by 6 inches high-speed engines direct connected to 5.75 K. W. dynamos together with condensers, pumps and switchboards. All the fixtures are of the standard U. S. marine type, and all wiring is done according to marine specifications.

Additional to the foregoing are the wiring of the police-steamer "Guardian" for sixty incandescent and one search light; Chestnut-Hill pumping-station 300 lights rewired; English High School wired for 592 lights; Sherwin School 111 lights; North End Park 125 lights; and other work of ordinary nature.



INTERIOR OF POWER-HOUSE, DEER ISLAND.

LIST OF ELECTRIC PLANTS OPERATED BY THE CITY.

LOCATION.	Incond. Lights.	Arc Lights.	Motors.	Boilers.	Engines.	Dynamos.	Capacity in Elec. H.P.	Installed by	Date.
City Hospital	4,000	.....	2	6	3	3	321.7	Electrical Construction Division.....	1897
Public Library	3,127	.....	8	3	3	3	301.0	General Elec. Co. and Siemens & Halske Co..	1895
House of Correction, Deer Island.....	1,000	2	.....	1	1	1	100.5	Electrical Construction Division	1896
Alms-house, Long Island	1,000	.....	4	4	3	3	48.0	J. S. Potter and C. & C. Electrical Co.	1892
Marine Park, City Point.....	181	.....	1	2	1	1	20.0	Hawkes Electrical Co.....	1895
Fire Department, Bristol street	151	.....	.....	2	2	2	30.0	Godfrey Electrical Co.	1894
Steamer "Guardian"	60	1	.....	1	1	1	4.	Electrical Construction Division	1896
" "General Hancock"	48	.....	.....	1	1	1	5.	Edison Co.....	1887
" "East Boston"	55	.....	.....	1	1	1	6.	N. E. Weston Electric Light Co.....	1892
" "Winthrop"	81	.....	.....	1	1	1	6.	Electrical Construction Division.....	1897
" "Revere"	81	.....	.....	1	1	1	6.	" " " "	1897
" "D. D. Kelley"	81	.....	.....	1	1	1	6.	" " " "	1897
*Water Department, Chestnut Hill	350	4	.....	4	1	1	35.5	" " " "	1896
*Water Department, West Medford	113	.....	.....	.....	.....	.....	20.0	" " " " .....	.....

* Now under control of Metropolitan Water Board.

Number of inspections for year 1897 . . .	1,819
Property covered by above inspections :	
Incandescent lights	15,324
Arc lights	61
Fixtures	8,326
Engines	20
Dynamos	20
Boilers	9
Private telephones	37
Electric bells	2,148
Switchboards	30
Speaking-tubes	952
Batteries	1,905
Private fire alarms	5
Watch-clocks	108
Annunciators	67
Transformers	5

Following are the special appropriations on school-house account expended during the year:

School buildings, improvements in:	
Edward Everett	\$8,743 31
Cyrus Alger	8,610 69
Roxbury street	9,941 11
Glenway.	400 40
Freeman	4,263 36
Cushman	1,513 92
Washington street, F. H.	56 70
Savin Hill	36 00
Common street, Charlestown	360 56
Mt. Pleasant avenue	364 05
Lewis	126 00
Chestnut avenue	1,434 23
Mechanic Arts High	1 60
Grant	1,067 81
Hobart street	7,140 59
Mead street	866 58
Bailey street	689 33
Quincy street, Roxbury	2,072 64
Everett, Brighton	36 00
Lowell	4,797 47
Warren	1,061 24
Canterbury street	841 93

Carried forward \$54,425 52

<i>Brought forward</i>	\$54,425	52	
Emerson, city proper	888	64	
Ware	285	50	
Eliot	4,039	35	
Frothingham	371	92	
Dillaway	14,414	65	
Franklin	11,305	46	
Lyman	10,437	17	
Old Edward Everett	9,418	93	
Somerset street	1,778	74	
Prince	19,411	35	
Chapman	1,956	83	
Adams street	5,463	67	
Appleton street	16,883	67	
Capen	15,351	86	
Howe	14,203	83	
Bunker Hill, Grammar	20,088	97	
Bunker Hill, Primary	13,152	67	
Tileston	12,446	01	
Harris	3,711	94	
Emerson, East Boston	15,397	60	
Pormort	573	78	
Salaries	3,667	84	
Teaming	537	54	
Fire extinguishers	2,773	87	
Incidentals	726	27	
			\$253,713 58
Gilbert Stuart school-house, furnishing	1,058	14	
Beech-street school-house, furnishing	939	30	
Roger Clap school-house, furnishing	3,972	30	
New Bowdoin school-house, furnishing and electric lights	8,244	64	
Brighton High school-house, furnishing	7,205	17	
Small wooden buildings:			
Hugh O'Brien school-yard	\$927	54	
Lowell school-yard	779	66	
Munroe-street school-yard	1,478	59	
Chapman school-yard	966	48	
			4,152 27
Allston club-house, furnishing	125	00	
Andrews school-house, furnishing	497	57	
Small wooden buildings, furnishings:			
Hugh O'Brien	\$1,783	81	
Chapman	1,813	99	
<i>Carried forward</i>	\$3,597	80	\$279,907 97

<i>Brought forward</i> . . .	\$3,597 80	\$279,907 97
Prescott	958 41	
Lowell	862 56	
		5,418 77
Thetford-street school-house, furnishing . .		2,393 18
Vernon-street school-house building . .		717 29
Sharp school-house, addition to lot . .		1,097 96
Longfellow school-house, furnishing . .		8,531 93
Dillaway school-house, addition to lot . .		625 85
Robinson-street school-house, furnishing . .		1,051 50
Primary school-house, Genesee street . .		1,126 42
Groton-street school-house, paving and fencing yard		1,996 10
		\$302,866 97

In addition to the foregoing, this department has in charge the contracting for, and the supplying of, the fuel for all departments of the city and county, not otherwise provided for, which include the Police, Fire, Streets, Parks, Health, Public Buildings, Public Libraries, Public Grounds, Paving, Sanitary, Street-Cleaning, Sewer, Bridge, Cemeteries, Gallup's Island, Markets, Police and Fireboats, also the County and District Municipal Courts. Requisitions are made as needed by each department; the amount required is inspected, weighed, and certified to by an employee of this department. The amount delivered to the several departments for the year ending February 1, 1898, is as follows, viz.:

Furnace coal, tons,	7,902	Cannel coal, tons,	79
Egg " "	3,896	Franklin " "	6
Stove " "	1,683	Nut " "	26
Cumberland coal, tons,	6,250		
		Total,	19,842
Nova Scotia wood, cords			51
Pine wood, cords			105
			156
Total			156
Total cost of above			\$94,792 45

INCOME.

The following are the buildings from which rents have been received during the past year, also from other sources, together with the amounts; all of which are in charge of this department:

Faneuil Hall market and cellars and outside stalls	}	\$84,977 80
Faneuil Hall building, stalls and cellar under Faneuil Hall		
Old State House		
House, 94 Roxbury street		10,350 00
Stable, Charlestown District		300 00
Curtis Hall		137 50
Ward-rooms		240 00
Rotunda and offices, Quincy Hall		346 00
Town Hall, Dorchester		2,800 00
Produce Exchange		21 00
Rooms in Quincy Hall		1,800 00
Old Franklin school-house		500 00
Heating Old State House		100 00
Electrical Construction Division		164 76
		65,828 84

The following list will show the number and location of buildings belonging to and hired by the city, which are under the charge of this department.

Respectfully submitted,

FREDERICK B. BOGAN,

Superintendent of Public Buildings.

PUBLIC BUILDINGS.

Buildings.	Location.	No. of ft. in lot.	Remarks.
City Hall.....	School st.....	25,915	
City Hall.....	City sq., Charles- town	8,246	Police Station No. 15 in this building; also branch of the Public Library, and Munic- ipal Court and Evening Drawing School. Police- wagon stable on this lot.
Faneuil Hall, and market under same	Faneuil Hall sq....	8,460	
Faneuil Hall market- house, and hall over same	North and South Market sts.....	27,400	
Old State House	State st.	4,239	
South City Stables	Albany st.....	90,780	Four build'gs and four sheds.
Highland-st. stables	Highlands.....	81,082	Three buildings.
West City stables	North Grove st. ...	33,306	Two buildings.
Curtis Hall	South st., W. R....	49,907	Branch of Public Library in this building.
Offal depot, wharf and dock	Albany st.	39,511	
Repairs Division Work Shop	Wareham st.	8,500	
Old Armory building....	Maverick st.	4,337	Ward-room 2 in this build- ing; upper part leased to Post 159, G.A.R.
Reception-house	North Grove st. ...	11,792	
Paving Dept. yard.....	Hancock street, Ward 20	109,444	Four buildings occupied by Paving Department.
House and land	94 Roxbury st.	4,190	Rents for \$300 per annum.
Central Charity Bureau, } City Temporary Home.. }	Chardon st.	19,962	Boiler and storehouse on lot.
Town Hall	Washington st., Dorchester	16,800	Used for drill hall, Dorches- ter High School.
Town Hall	Washington st. ...	13,431	Ward-room 25 in this build- ing; other room leased to Post 92, G.A.R. for 5 years, from December 1, 1893.
Stable	Rutherford ave....	17,300	Two buildings occupied by Health Department.
Old bath-house.....	Cabot st.	7,469	Ward-room 18 in this build- ing.
Wayfarers' Lodge	Hawkins st.	9,523	
Church building	Cor. Dudley and Vine sts.	11,592	Ward-room 17 in this build- ing, and Vine-st. Chapel on this lot.
Small-pox Hospital	Canterbury st.	182,168	
Old Franklin Sch'l-house,	Washington st....	11,471	Ward-room Posts 15 and 7, G.A.R., in this building.

PUBLIC BUILDINGS. — *Concluded.*

Buildings.	Location.	No. of ft. in lot.	Remarks.
¹ Old Winthrop school-house.....	Bunker Hill st., Charlestown ...	7,927	Armory and Ward-room 3 in this building.
¹ Old Court House.....	Court sq.....	15,175	Occupied by city offices.
Westerly Hall.....	Centre st., West Roxbury	5,644	Public Library Branch in this building.
Stable	Chauncey pl.....		Rents for \$150 per year, on lot with Chauncey-pl. school.
¹ Smith school-house	Joy st.	1,938	Leased to Post 134, G.A.R., from January 1, 1893, to January 1, 1899.
¹ Engine-house lot.....	Soley st.....	2,230	
¹ Old Probate Court build- ing.....	Court sq.....	2,423	Occupied by the Street De- partment.
Historical building.....	30 and 32 Tremont st.	25,000	
Ward-room 20.....	Meeting House Hill		On lot with Mather school- house.
Ward-room 19.....	Elmwood st.	5,684	

¹ The above buildings were surrendered to this department, as not wanted for school, fire or county purposes.

In addition to the foregoing, the following property was leased for the use of this department:

Location of Buildings.	Rent.	No. of Rooms.	Occupied by
37 Pemberton sq.	\$5,800 per year and taxes. Police Department pay one-fourth of rent	Whole building.	Police Commissioners and Police Dept.
994 Washington st.....	\$1,100 per year...	5	Milk Inspector.
Exchange Building.....	\$2,000 per year...	3	Park Commissioners. Vacated April 1, 1897.
Mattapan	\$198 per year.....	3	Lock-up, Police Dept.
32 Tremont st.	\$9,000 per year...	1st and 2d floors.	Public Institutions and Street Department. Rent paid till Febru- ary 24, 1897, when city bought the build- ing.
73 Tremont st.....	\$4,053 per year...	12 rooms.....	Law Department.
73 Tremont st.....	\$3,494 per year...	9 rooms.....	Sanitary, Street-Clean- ing and Bridge Divi- sions of the Street Department.
73 Tremont st.....	\$361 per year....	2 rooms.....	Street-watering Divi- sion of the Street De- partment.

ARMORIES.

The following list will show the location and rents of all armories February 1, 1898, in charge of this department:

Occupied by	Rent per annum.	Location of Armories.
Headquarters, Second Brigade.....	\$900	37 Tremont street.
Company A, Fifth Regiment.....	\$1,200	Congress Hall, Charlestown. Lease expires January 1, 1901.
" H, " "	City building.	Hose-house No. 3, Winthrop street, Charlestown.
" L, Sixth "	\$1,085	7 Green street.
" D, Ninth "	City building.	Old Winthrop school-house, Bunker Hill street.
" A, First Batt. of Cavalry..	City building.	Engine-house No. 4, Bulfinch street.
" D, " " "	\$1,200	Bacon's Hall.
" A, " Corps of Cadets..	\$4,800	130 Columbus avenue.
" B, " " "		
" C, " " "		
" D, " " "		

COUNTY BUILDINGS.

Buildings.	Location.	No. of ft. in lot.	Remarks.
Court House.....	Pemberton sq....	87,035	Three buildings.
Jail	Charles st.....	130,740	
Municipal Court, Southern District	Roxbury st.....	14,390	Evening Drawing School in this building.
Municipal Court, E. Boston.	High School building.		
" " S. Boston.	Corner Dorchester and West Fourth sts.		
" " Charlestown.	City sq.		
" " Brighton..	Washington st.		
" " W. Roxbury.	Station-house 13.		
" " Dorchester.	" 11.		

POLICE STATION-HOUSES.

	Location.	No. of feet in lot.	Remarks.
No. 1.....	Hanover st.....	6,188	
2.....	Court sq.....	2,029	
3.....	Joy st.....	6,100	
4.....	La Grange st.....	5,150	
5.....	East Dedham st.....	3,303	Addition built in 1884.
6.....	West Broadway	4,253	
7.....	Meridian st.....	3,773	
8.....	Commercial st.....	5,323	Harbor Police-station.
9.....	Dudley st.....	6,797	Police-wagon stable in this house.
10.....	Pyncheon st.....	6,203	
11.....	Adams st., Ward 20.....	7,500	Court-room and branch of Public Library in this building.
12.....	East Fourth st., near K st. ..	7,217	
13	Seaverns ave., cor. Maple place, W. Roxbury	9,701	Municipal Court, W. Roxbury District, and patrol-wagon house on this lot.
14.....	Washington st., Brighton....	53,908	Municipal Court, Brighton District, in this building.
15	City Hall, Charlestown		
16.....	Boylston st.....	10,486	
Lock-up...	Walnut st., Neponset	1,476	
"	Centre st., W. Roxbury	1,628	
"	Mattapan		Hired at rental of \$198 per year.
Police quarters.	Washington st., Bank building, Dorchester	11,640	Branch Public Library in this building.

ENGINE-HOUSES.

	Location.	No. of feet in lot.	Remarks.
No. 1.....	Dorchester st.....	5,698	Addition built 1874. Municipal Court, Ward-room 15, and two classes, branch of Bigelow School, in the building.
2.....	East Fourth st., cor. O.....	4,000	
3.....	Harrison av., cor. Bristol st.	4,000	Ladder Truck 3 in this building.
4.....	Bulfinch st.....	6,098	Lancers' Armory, Chemical Engine No. 1 and Water Tower in this building.
5.....	Marion st., E. B.....	1,647	
6.....	Leverett st.....	2,269	

ENGINE-HOUSES. — *Concluded.*

	Location.	No. of feet in lot.	Remarks.
No. 7.....	East st.....	1,893	
8.....	Salem st.....	2,568	
9.....	Paris st., E. B.....	4,720	Ladder Truck 2 in this building.
10.....	Mt. Vernon st.....	1,886	
11.....	Saratoga st.....	10,000	Combination 4 in this building.
12.....	Dudley st.....	7,320	
13.....	Cabot st.....	4,832	
14.....	Centre st.....	5,713	
15.....	Dorchester ave.....	2,843	
16.....	River st., Dor. Dist.....	12,736	Ladder Truck 6 in this building.
17.....	Meeting-House Hill, D. D..	9,450	Ladder Truck house on this lot.
18.....	Harvard st., Dor. Dist....	9,440	
19.....	Norfolk st., Dor. Dist.....	7,683	
20.....	Walnut st.....	9,000	
21.....	Boston st., Dor. Dist.....	9,355	
22.....	Dartmouth st.....	4,463	
23.....	Northampton st.....	3,445	
24.....	Cor. Warren & Quincy sts.,	4,186	
25.....	Fort Hill sq.....	4,175	Ladder Trucks 8 and 14 in this building.
26-35..	Mason st.....	5,623	
27.....	Elm st., Charlestown.....	2,600	
28.....	Centre st., West Roxbury.	10,377	Ladder Truck 10 in this building.
29.....	Chestnut Hill av., Brighton	14,358	Ladder Truck 11 in this building.
30.....	Mt. Vernon st., W. Roxbury	16,275	
32.....	Bunker Hill st.....	8,188	
33.....	Boylston st.....	5,646	Ladder Truck 15 in this building.
34.....	Western ave., Brighton....	4,637	
36.....	Monument st.....	5,668	Combination 5 in this building.
37.....	Cor. Longwood and Brook- line aves.....	5,400	Chemical Engine No. 3 in this building.
38-39 ..	Congress st.....	4,000	
40	Sumner st.....	4,010	
41	Harvard ave., Brighton....	6,112	Chemical Engine No. 6 in this building.
42	Washington st., bet. Ather- ton and Beethoven sts..	3,848	Chemical Engine No. 5 in this building.
43	Andrew sq.	5,133	Combination 3 in this building.
45.....	Washington st., W. R.....	14,729	Ladder Truck No. 16 in this house.

CHEMICAL ENGINE-HOUSES.

	Location.	No. of feet in lot.	Remarks.
No. 2.....	Church st.	3,412	
4	Shawmut ave.....	889	
7	Chelsea st.	1,346	
8	B st., South Boston.....	1,804	
10	Eustis st.	1,754	
11.....	North Grove st.....	3,918	

COMBINATION WAGON-HOUSES.

	Location.	No. of feet in lot.	Remarks.
No. 1.....	Dorchester ave.....	4,875	
2	East Fourth st.....	3,101	

HOSE-HOUSE.

	Location.	No. of feet in lot.	Remarks.
No. 3.....	Winthrop st.....*	3,000	Charlestown.

LADDER-HOUSES.

	Location.	No. of feet in lot.	Remarks.
No. 1.....	Friend st.....	1,676	
4.....	Cor. Winslow & Dudley sts.,	3,923	
5.....	West Fourth st.....	2,469	
7.....	Meeting-House Hill.		On lot with Engine House 17.
9.....	Main st., Charlestown.....	4,290	Chemical Co. No. 9 in this bldg.
12.....	Tremont st.....	4,350	Chemical Co. No. 12 in this bldg.
13.....	Washington st., near Dover,	1,007	
17.....	Harrison ave.....	2,134	

MISCELLANEOUS. — *Fire Department.*

	Location.	No. of feet in lot.	Remarks.
Repair-shop.....	Albany st.....	23,663	
Fire Department Head- quarters.....	Bristol st.....		
Fuel-house.....	Salem st.....	417	
Fuel-house.....	Main st., Charlesto'n,	2,430	
Lot for ladder-house....	Washington st., Dor.,	6,874	
Fuel-house.....	Dorchester st.....	1,610	
Lot for engine-house....	Centre st., W. Rox...	12,251	

City Scales, located as follows, viz.:

North Scales, Haymarket square.

South Scales, City stables, yard, Albany street.

South Boston Scales, Foundry street and Dorchester avenue.

Roxbury Scales, Eustis and Mall streets.

Brighton Scales, Rockland street, off Washington street.

East Boston Scales, Liverpool street.

West Roxbury Scales, Centre and La Grange streets.

Jamaica Plain Scales, Centre street and Starr lane.

City Pound, located as follows, viz.:

East Boston, Ashley avenue.

SCHOOL-HOUSES.

NAME.	Grade of School.	Location.	No. feet in lot.	When built.	No. of Rooms.	Remarks.
Abby W. May ..	Pr.	Thornton st., R.	11,052	1893	6	Old Agassiz School on this lot.
Aberdeen	Pr.	Chiswick road..	25,000	1897	2	
Adams	Gr.	Sumner st., E.B.	21,000	1856	13 and hall.	
Adams st.....	Pr.	Dorchester.....	44,555	1861	2	
Agassiz	Gr.	Brewer st., W.R.	42,244	1893	12 and hall.	
Andrews	Pr.	Genesee st.....	19,761	1896	9	
Appleton st.....	"	Appleton st.....	18,454	1870	12	

SCHOOL-HOUSES. — *Continued.*

NAME.	Grade of School.	Location.	No. feet in lot.	When built.	No. of Rooms.	Remarks.
Atherton st.....	Pr.	Columbia st., Dor. Dist.....	25,087	1872	8	
Anburn	"	School st., Br...	12,340	.....	4	
Bailey st.....	"	Dorchester.....	21,838	1880	4	
Baker st.....	"	West Roxbury.	10,464	.....	1	
Baldwin.....	"	Chardon court..	6,139	1864	6	
Bartlett st.....	"	Bartlett st., R...	7,627	1846	6	
Benj. F. Tweed..	"	Cambridge st., Chn.....	16,727	1892	6	
Benjamin Pope.	"	O st., S. B.	20,000	1883	8	
Bennett	Gr.	Chestn't Hill av. Br.	26,648	1874	7 and hall.	
Bennett Branch.	"	Dight'n pl., Br..	9,605	1886	6	
Bigelow.....	"	West Fourth st., S. B.....	21,958	1850	14 and hall.	
Blackinton.....	Pr.	Leyden st., E.B.	29,166	1892	6 and hall.	
Bon Homme Richard	"	Meeting-House Hill, D. D.....	.....	1895	1	On lot with Mather school-house.
Bowditch.....	Gr.	Green st., J. P..	23,655	1891	12 and hall.	
Bowdoin.....	"	Myrtle st.....	10,777	1895	16 and hall.	
Brighton High..	H.	Cambridge st...	41,871	1895	17 & 2 halls.	
Brimmer.....	Gr.	Common st.....	11,401	1843	14 and hall.	
Bunker Hill....	"	Baldwin st., Ch.}	19,600	.....	14 and hall.	Ward-room 4 in this building,
Bunker Hill....	Pr.	Bunker Hill st.}	.....	.....	8	
Canterbury st..	"	West Roxbury	20,121	.....	2	
Capen	"	East Sixth st., S. B.	12,354	1871	6	
Chapman.....	Gr.	Eutaw st., E. B.	20,500	1850	13 and hall.	Ward-room 1 in this building.
Chapman an- nex	{ Pr. & MT	" " "	.....	1896	2	In the Chapman school-house yard.
Charlestown High,	H.	Monum't sq., Ch.	10,247	.....	10 and hall.	
Chas. C. Perkins,	Pr.	St. Botolph st...	16,000	1891	8 and hall.	
Charles Sumner,	Gr.	Ashland st., W.R.	30,000	1877	10 and hall.	
Chauncey pl....	.....	Charlestown....	7,410	.....	1	Stable on this lot.
Chestnut ave....	Pr.	West Roxbury..	13,733	.....	2	
Choate Burnh'm,	"	East Third st., S. B.	17,136	1894	8	
Christo'r Gibson,	Gr.	Mt. Bowdoin, Dor. Dist.....	39,620	1895	14 and hall.	

SCHOOL-HOUSES. — *Continued.*

NAME.	Grade of School.	Location.	No. feet in lot.	When built.	No. of Rooms.	Remarks.
Clinch.....	Pr.	F st., S. B.....	13,492	1871	6	
Comins.....	Gr.	Tremont st., Rox.	22,169	1856	13 and hall.	
Common st.	Pr.	Charlestown ...	7,001	.....	6	
Cook.....	"	Groton st.	10,170	1852	6	
Cottage pl.	Kg.	Highlands.....	7,094	1859	4	
Cross st.	Pr.	Charlestown...	1,708	.....	2	
Cudworth.....	"	Paris and Gove sts., E. B.....	25,000	1894	11	
Cushman.....	"	Parmenter st. ...	.....	1867	16	On lot with Han- cock.
Cyrus Alger.....	"	W. Seventh st., S. B.....	16,560	1880	8	
Dearborn	Gr.	Dearborn court, Rox.,....	36,926	1852	14 and hall.	
Dillaway	"	Kenilworth st., Rox.....	22,824	1882	12 and hall.	
Dorchester ave..	Pr.	Dorchester ave., Ward 24	34,460	.....	4	
Dorchester High,	H.	Dorchester ave., Ward 20.....	59,340	1870	8	
Drake	Pr.	C st., S. B.....	10,260	1869	6	
Dudley.....	Gr.	Dudley st., Rox.	26,333	1874	14 and hall.	
Dwight.....	"	W. Springf'd st.	19,125	1857	14 and hall.	
E. Boston High..	H.	Meridian st., E. B... ..	13,616	1846	6 and hall.	Library and court- room in this building.
Edward Everett,	Gr.	Sumner st., Ward 20	33,890	1876	10 and hall.	Old Everett school- house on this lot.
Eliot.....	"	N. Bennet st. ...	11,077	1838	14 and hall.	
Emerson.....	"	Prescott st., E. B.....	39,952	1865	16 and hall.	
Emerson.....	Pr.	Poplar st., W. E.	5,924	1861	6	
English High....	H.	Montgomery st.	85,560	1877	39 & 2 halls.	South End Branch of Public Library in this building.
Eustis st.	Pr.	Roxbury.....	16,165	1895	6	
Everett.....	Gr.	Camden st.	32,409	1860	14 and hall.	
Everett.....	Pr.	Brentwood st., Br.	44,237	.....	2	
Florence st.	"	Florence st., W. R.	25,030	.....	6	Addition built 1890.
Franklin.....	Gr.	Ringgold st.	16,439	1859	14 and hall.	
Freeman	Pr.	Charter st, W. E.	5,247	1868	6	

SCHOOL-HOUSES. — *Continued.*

NAME.	Grade of School.	Location.	No. feet in lot.	When built.	No. of Rooms.	Remarks.
Frothingham....	Gr.	Prospect st., Charlestown...	22,079	1874	16 and hall.	
Gaston	"	East Fifth, cor. L st., S.B....	35,358	1872	14 and hall.	
George Putnam,	"	Columbus ave., Egleston sq...	31,784	1880	10 and hall.	
George st.....	Pr.	Highlands	18,894	1861	6	
Girls' High.....	H.	} West Newton st.....	30,454	1870	66 and hall.	The number of rooms include those for recitation and apparatus.
Girls' Latin	L.					
Gilbert Stuart...	Gr.	Richmond st., Dor. Dist....	30,128	1896	14 and hall.	
Glenway	Pr.	Ward 20.....	25,827	1880	2	
Grant	Gr.	Phillips st., West End	3,744	1852	4	
Hancock	"	Parmenter st., North End ...	31,998	1847	14 and hall.	Cushman school-house on this lot.
Harbor View st.,	Pr.	Dorchester	27,808	1883	4	Mayflower school-house on this lot.
Harris.....	Gr.	Adams st., Ward 24.....	37,150	1861	8 and hall.	Little Emily school-house on this lot.
Harvard	"	Devens st., Ch..	16,306	.....	14 and hall.	Ward-room 5 in this building.
Harvard	Pr.	N. Harvard st., Brighton.....	20,750	.....	4	
Harvard Hill....	"	Harvard st., Ch.	4,645	.....	8	
Hawes Hall....	"	W. Broadway, So. Boston ...	16,647	1823	8	Simmonds school-house on this lot.
Heath st.....	"	Highlands	10,669	1857	2	
Henry L. Pierce,	Gr.	Washington st., Ward 24.....	64,439	1891	12 and hall.	
Hillside	Pr.	Elm st., J. P....	18,613	.....	6	
Hobart st.....	"	Brighton	10,000	1884	2	
Horace Mann...	D. M.	} Newbury st....	8,400	1889	18 & 2 halls.	
Howard ave....	Pr.					
Howard ave. annex.....	"	Howard ave., Dor. Dist....	.....	1896	2	On lot Howard ave. school-house.
Howe	"	West Fifth st., So. Boston ...	12,494	1874	8	
Hugh O'Brien ..	Gr.	Dudley st. Rox.,	40,554	1887	14 and hall.	
Hugh O'Brien annex .....	"	" " "	.....	1896	2	On lot with Hugh O'Brien school-house.

SCHOOL-HOUSES. — *Continued.*

NAME.	Grade of School.	Location.	No. feet in lot.	When built.	No. of Rooms.	Remarks.
Hyde	Gr.	Hammond st., Roxbury	20,754	1884	14 and hall.	
Ingraham	Pr.	Sheafe st., N.E.,	2,354	1848	3	
Ira Allen	"	Leon st., Rox...	10,057	1851	4	
John A. Andrew, Gr.		Dorchester st., South Boston,	24,889	1876	16 and hall.	
Joshua Bates....	Pr.	Harrison ave...	15,237	1884	8	
Lawrence	Gr.	B and W. Third sts., S. B.	14,343	1856	14 and hall.	
Lewis	"	Sherman st., Roxbury	27,850	1868	12 and hall.	
Lincoln	"	East Broadway, South Boston.	24,500	1859	14 and hall.	
Little Emily....	Pr.	Adams st., Dor. ....	.....	1895	1	On lot with Harris school-house.
Longfellow	Gr.	Hewlett, W. R..	21,679	1897	10 and hall.	
Lowell	"	Centre st., Rox.	35,241	1874	14 and hall.	
Lowell annex ..	"	Mozart st., Rox.	.....	1896	2	
Lucretia Crocker	Pr.	Parker st., Rox.	30,000	1884	8	
Lyceum Hall	"	Meeting-House Hill, Dor.	21,319	....	6	
Lyman	Gr.	Paris st., E. B..	26,200	1870	14 and hall.	Rebuilt, 1872.
Margaret Fuller,	Pr.	Glen Road, Jamaica Plain	14,252	1892	6	
Martin	Gr.	Huntington av.	28,307	1885	14 and hall.	
Mary Hemenway	"	Adams st., D. D.	30,000	1897	13 and hall.	
Mather	"	Meeting-House Hill, Dor.	123,050	1872	10 and hall.	Old Mather and Bon Homme Richard school-houses on this lot, also Ward-room 20.
Mather	Pr.	W. Broadway, South Boston,	10,160	1842	12	
Mayflower	C. S.	Harbor View st., Dor. Dist.	.....	1895	1	
Mayhew	Pr.	Chamber st., West End	14,128	1897	14	On lot with Harbor View-st. school-house.
Mead st.	"	Charlestown ...	5,857	1847	4	
Mechanic Arts..	H.	Belvidere st, Back Bay	22,881	1893	16	The number of rooms includes one used as a blacksmith shop.
Medford street..	Pr.	Charlestown ...	12,112	1886	4	
Minot	Gr.	Neponset ave., Dor. Dist.	31,500	1885	7 and hall.	
Mt. Pleasant av.,	Pr.	Highlands	9,510	1847	2	

SCHOOL-HOUSES. — *Continued.*

NAME.	Grade of School.	Location.	No. feet in lot.	When built	No. of Rooms.	Remarks.
Morton st.....	Pr.	Dorchester....	21,115	1895	4	
Mount Vernon..	"	Mt. Vernon st., Ward 23, W. R.,	22,744	....	4 and hall.	
Munroe st.....	"	Highlands.....	13,021	1854	2	
Munroe-st,ann'x	"	Bower st., Rox.,	.....	1897	1	On lot with Munroe-st. school-house.
Noble.....	"	Princeton st., East Boston..	17,500	1874	8	
Norcross	Gr.	D st., S. B.....	12,075	1868	14 and hall.	
N. Margin.....	L. M.	} N. Margin st., North End ..	1,661	1837	2	
Old Oak sq.....	....	Brighton	9,796	.....	2	Unoccupied.
Oak sq.....	Pr.	Nonantum st..	20,000	1894	2	
Old Agassiz.....	"	Burroughs st., J. P.	.....	.....	6	On lot with Agassiz School.
Old Brighton High .....	....	Chestnut Hill ave., Br.....	54,448	.....	5 and hall.	Unoccupied.
Old Everett	Pr.	Willis st., D. D.,	.....	1855	7	On lot with Edw. Everett.
Old Gibson.....	"	School st., Ward 20.....	53,398	1857	6	
Old Mather.....	"	Meeting-House Hill, Dor. ....	.....	1856	6	On lot with Mather school-house.
Old Roxbury High	Kgt	Kenilworth st., Roxbury	6,990	1861	8	
Parkman.....		Silver st., S. B..	5,306	1848	6	Unoccupied.
Phillips	Gr.	Phillips st., West End	11,190	1862	14 and hall.	
Phillips st.....	Pr.	Highlands	20,355	1867	8	
Phineas Bates...	Gr. Pr.	} Beech st., W. Roxbury .	37,500	1896	4	
Pierpont	MT	Hudson st.	4,216	1850	1	Ward-room 7 in this building.
Plummer	Pr.	Lamson and Summer sts., East Boston..	35,073	1891	10 and hall.	
Polk st.....	"	Charlestown ...	12,143	1878	6	
Poplar st.	"	West Roxbury.	7,842	.....	1	Unoccupied.
Pormort.....	Pr.	Snelling place, West End	4,373	1855	6	
Prescott	Gr.	Elm st., Charles- town	16,269	.....	10 and hall.	
Prescott annex.	MT	Elm st., Charles- town .....	.....	1896	1	On lot with Prescott School.

SCHOOL-HOUSES. — *Continued.*

NAME.	Grade of School.	Location.	No. feet in lot.	When built.	No. of Rooms.	Remarks.
Prince.....	Gr.	Newbury st....	22,960	1875	12 and hall.	Ward-room 11 in this building.
Public Latin....	L.	Warren ave. . . . .	.....	1877	39 and hall.	On lot with English High School.
Quincy	Gr.	Tyler st.....	12,413	1847	14 and hall.	
Quincy st.....	Pr.	Dorchester	20,000	1882	2	
Quincy st.....	"	Highlands.....	23,453	1875	8	
Rice	Gr.	Dartmouth st..	27,125	1869	14 and hall.	Normal and Rice Training Schools in this building and Ward-room 10 in this building.
Robinson st....	Pr.	Dorchester	25,032	1897	8	
Robert G. Shaw.	Gr.	Hastings st., W. Roxbury .	40,000	1892	8 and hall.	
Roger Clap.....	"	Harvest st., Dor. Dist.	21,548	1896	10 and hall.	
Roxbury High ..	H.	Warren st.	25,617	1891	19 and hall.	
Roxbury st....	Pr.	Highlands	14,147	1874	8	
Rutland st.....	"	Rutland st.....	7,850	1851	6	
Savin Hill.....	"	Savin Hill ave., Dor. Dist.	20,060	1884	2	
Sharp	"	Anderson st. ...	5,887	1824	6	
Sherwin.....	Gr.	Madison sq., Roxbury	32,040	1870	16 and hall.	
Shurtleff	"	Dorchester st..	40,553	1869	14 and hall.	
Simonds	Pr.	W. Broadway, South Boston. ....	.....	1840	3	On Hawes school-house lot.
Skinner	"	Fayette st.	5,238	1870	6	
Smith st.	Kg.	Roxbury	6,952	1849	2	
Somerset st....	Pr.	Ward 6.....	6,300	1824	4	
Stephen M. Weld,	"	Canterbury st., W. Roxbury..	34,266	1895	6	
Stoughton	"	River st., Lower Mills	29,725	1856	8	
Tappan	"	Lexington st., East Boston..	11,500	.....	8	
Thetford st....	"	Dorchester	29,879	1875	8	
Thomas N. Hart,	Gr.	East Fifth st., South Boston,	26,264	1889	13 and hall.	
Thomas N. Hart, annex	Kg.	H st., S. B.	11,477	1895	2	
Ticknor	Pr.	Dorchester st., South Boston,	11,486	1865	12	

SCHOOL-HOUSES. — *Concluded.*

NAME.	Grade of School.	Location.	No. feet in lot.	When built.	No. of Rooms.	Remarks.
Tileston	Gr.	Norfolk st., Ward 24.....	83,640	1868	8 and hall.	
Tuckerman	Pr.	East Fourth st., South Boston,	11,655	1850	6	
Tyler st.....	"	Tyler st.....	3,900	1855	6	
Union st.....	"	Brighton	67,280	.....	2	
Vernon st.	"	Highlands	17,256	1897	10	
Wait	"	Shawmut ave...	16,341	1860	8	
Walnut st.....	"	Neponset, D.D.,	22,790	1856	7	
Ware	Gr.	N. Bennet st., ...	6,439	1852	4	Ward-room 6 in this building.
Warren	"	Summer st., Ch.,	14,322	.....	14 and hall.	
Washington All- ston	"	Cambridge st., Brighton	22,000	1878	10 and hall.	
Washington All- ston annex....	"	Cambridge st., Brighton	11,477	.....	3	
Washington st...	Pr.	Forest Hills....	24,010	.....	2	
Washington st...	"	Germantown, W. R.....	13,130	.....	2	
Way st.....	"	Ward 9	2,508	1850	3	
Webster	"	Webster av., Br.,	19,761	.....	4	Addition built in 1885.
Wells	Gr.	Blossom st., West End	10,770	1868	12 and hall.	
West Concord st.	Pr.	W. Concord st..	10,756	1845	10	Ward-room 12 in this building.
West Roxbury High.....	H.	Elm st., W. R...	47,901	.....	6	
Weston st.....	Pr.	Highlands.....	14,973	1877	8	
Williams.....	"	Homestead st., Roxbury.....	26,145	1892	4	
William H. Kent,	"	Moulton st., Chn.	15,817	1895	6	
William Wirt Warren.....	"	Waverley st., Br.	27,137	1892	6 and hall.	
Winchell	"	Blossom st.....	14,465	1885	12	
Winship.....	"	Dighton pl., Br.	34,366	.....	4	
Winthrop	Gr.	Tremont st....	16,100	1855	14 and hall.	
Winthrop st....	Pr.	Highlands.....	9,775	1857	4	
Wyman	"	Wyman st., J.P.	30,414	1892	6	
Yeoman st.....	"	Highlands.....	18,200	1870	12	
School Commit- tee Building...	....	Mason st.....	7,148	.....	10 and com- mittee chamber.	

Gr., Grammar; Pr., Primary; H., High; Kgt., Kindergarten; L., Latin; D. M., Deaf Mutes; N. & T., Normal and Training; L. M., Licensed Minors; M. T., Manual Training; C. S., Cooking School.

The following lots of land have been bought for school purposes, amounting to 283,357 sq. feet of land.

Adams and Chestnut streets, 20,399 sq. feet of land.

Baker street, W. R., 21,000 sq. feet of land.

Centre street, Dorchester, 60,000 sq. feet of land.

North Bennet street and Prince street, 18,986 sq. feet of land.

Walk Hill street, 30,000 sq. feet of land.

Paul Gore street, 32,346 sq. feet of land.

Marion street, 27,500 sq. feet of land.

Thomas Park, 52,926 sq. feet of land.

School street, Eggleston square, 20,200 sq. feet of land.

HIRED BUILDINGS.

In addition to the foregoing the following rooms have been hired for school purposes. Rent and taxes paid for the same during the year amounted to \$25,815.62 :

Name.	Location.	Remarks.
Kindergarten	7 Byron court, Roxbury.....	Rent, \$360 per annum.
Wise Hall.....	South st., Roslindale.....	Rent, \$1,200 per annum.
Wise Building.....	Poplar st., Roslindale.....	" \$1,000 " (Vacated Oct. 1, 1897.)
Wise Building Stores.....	Poplar st., Roslindale.....	Rent, \$480 per annum. (Vacated Oct. 1, 1897.)
Wells Branch.....	Chambers st.....	Rent, \$800 per annum. (One-half cost of gas used.)
Manual Training School..	Eliot st., Jamaica Plain.....	Rent, \$300 per annum.
Day's Chapel.....	Parker st., Roxbury.....	" \$350 "
East Boston Evening Drawing School.....	Stevenson's Block, E. B.....	" \$940 "
Manual Training School..	E st., South Boston	" \$1,900 "
Charles Sumner Branch..	Church, Roslindale	" \$850 " (Vacated Oct. 1, 1897.)
Kindergarten	Unity Chapel, Washington Village, South Boston.....	Rent, \$300 per annum.
Kindergarten	Kettelle building, 34 Adams st., Dorchester.....	Rent, \$540 per annum. (Water-rates.)
Edward Everett Branch..	Athenæum building, Cottage st., Dorchester.....	Rent, \$800 per annum. (Vacated July 1, 1897.)
Hancock Branch.....	North End Union, 20 Par- menter st.....	Rent, \$2,300 per annum.
Kindergarten	32 Parmenter st.	" \$500 "
Lowell Branch.....	Workingmen's building, Cen- tre st., Roxbury.....	" \$600 "

HIRED BUILDINGS.—*Concluded.*

Name.	Location.	Remarks.
East Boston High School Drill Hall.....	E. B. Athletic Ass'n build- ing, Paris st.....	Rent, \$520 per annum. (Vacated March 1, 1897.)
Hancock Branch.....	Lewis block, 115 and 121 Salem st.....	Rent, \$1,200 per annum.
Kindergarten	65 George st., Roxbury.....	" \$360 "
Primary School.....	31 North Russell st.....	" \$1,800 "
Kindergarten	Centre-st. Church, Jamaica Plain	" \$500 "
Kindergarten	Trenton st., E.B.....	" \$600 "
Maverick Chapel.....	Bennington st.....	Rent, \$672 per annum, including heating.
Kindergarten	East Fourth st.....	Rent, \$480 per annum.
Primary and Grammar Classes	Moon st.....	" \$5,400 "
Vernon-st. School.....	Putnam Chapel.....	Rent, \$240 per annum. (Vacated March 1, 1897.)
Carey Hall.....	Clarendon Hills.....	Rent, \$500 per annum. (Vacated April 1, 1897.)
Primary School.....	242 Bennington st.....	Rent, \$480 per annum.
Kindergarten	166 Lauriat ave.....	" \$180 "
Primary School.....	Greenwood Hall.....	" \$720 "
Primary School.....	38 Chambers st.....	" \$600 "
Kindergarten	Boylston Chapel.....	" \$300 "
Primary School.....	341 Centre st.....	" \$480 "
Kindergarten	370 Warren st.....	" \$600 "
Primary School.....	484 East Fourth st.....	" \$400 "
Primary School.....	Washington st., Dor. Dist. ..	" \$360 "
Evening Drawing School,	147 Columbus ave.....	" \$1,300 "
Kindergarten	766 Huntington ave.....	" \$780 "

WARD-ROOMS.

The following list will show the location of the various ward-rooms in this city:

Ward.	Buildings.	Location.
1.....	Chapman school-house.....	Eutaw street.
2.....	Armory building.....	Maverick street.
3.....	Old Winthrop school-house.....	Bunker Hill street, Charlestown.
4.....	Bunker Hill Grammar school-house.	Baldwin street, Charlestown.
5.....	Harvard Grammar school-house.....	Devens street, Charlestown.
6.....	Ware Primary school-house.....	North Bennet street.
7.....	Pierpont school-house.....	Hudson street.
8.....	Wells school-house.....	Blossom street.
9.....	Old Franklin school-house.....	Washington street.
10.....	Rice school-house.....	Appleton street.
11.....	Prince school-house.....	Exeter street.
12.....	School-house.....	West Concord street.
13.....	Spellman Hall.....	West Broadway.
14.....	Gray's Hall.....	East Broadway.
15.....	Court-room, South Boston.....	Dorchester and W. Fourth streets.
16.....	Winthrop Hall.....	Upham's Corner.
17.....	Old church building.....	Dudley street.
18.....	Old bath-house.....	Cabot street.
19.....	Old pumping-station.....	Elmwood street.
20.....	Ward-room building.....	Meeting-House Hill.
21.....	Dudley-street Opera House.....	Dudley street.
22.....	Tomfohrde Hall.....	Boylston Station.
23.....	Minton Hall.....	Forest Hills Station.
24.....	Dorchester Hall.....	Field's Corner, Dorchester.
25.....	Old Town Hall.....	Washington street, Brighton.



ANNUAL REPORT
OF THE
PUBLIC GROUNDS DEPARTMENT
FOR THE YEAR 1897.

CITY OF BOSTON, PUBLIC GROUNDS DEPARTMENT,
CITY GREENHOUSES, E. COTTAGE STREET,
DORCHESTER, January 31, 1898.

HON. JOSIAH QUINCY,

Mayor of the City of Boston :

DEAR SIR: In compliance with the Revised Ordinances, I herewith submit my annual report of the expenditures of the Public Grounds Department for the year beginning February 1, 1897, and ending January 31, 1898.

Respectfully submitted,

WM. DOOGUE,
Superintendent.

PAYMENTS FOR EXPENSES UNDER THE GENERAL APPROPRIATION
FOR THE YEAR BEGINNING FEBRUARY 1, 1897, AND ENDING
JANUARY 31, 1898.

Salary, superintendent	\$4,000 00
Salary, assistant superintendent	2,000 00.
Labor on snow	2,910 56
Teaming and reteaming plankwalks	1,800 00
<i>Carried forward</i>	<u>\$10,710 56</u>

<i>Brought forward</i>		\$10,710 56
Hay, grain, etc.	\$946 68	
Shoeing horses	288 23	
Veterinary services and medicines	118 45	
Blankets	36 90	
		1,390 26
Repairs on harnesses and vehicles		801 36
Water-rates		560 00
Freight, expressage, etc.		559 78
Tools and repairs		495 50
Flower-pots, boxes, etc.		492 48
Car-fares and travelling expenses		491 00
Claims —		
Mrs. Ellen McAvena	\$300 00	
Evelyn B. Ransom	150 00	
L. S. King	5 00	
		455 00
Rent of playgrounds —		
Nightingale Field	\$150 00	
Brighton	200 00	
Neponset	100 00	
		450 00
Small supplies, paint, etc.		430 98
New plankwalks		388 80
New Goddard buggy	\$285 00	
Second-hand Goddard buggy	100 00	
		385 00
Hardware		379 22
Teaming settees		350 00
Hose		209 50
Lawn mowers and repairs		204 14
Horse purchased		137 50
Advertising		25 99
Storage rent		20 00
Physicians' services		12 00
Carriage cushions		5 00
		\$18,954 07
<i>Office.</i>		
Labor	\$1,500 00	
Stationery, printing, etc.	237 26	
Telephone rental	195 35	
Compiling papers, etc.	105 00	
Exchange on typewriter and bath	88 00	
Electrical telephone	25 00	
Cleaning office	24 00	
Coal	9 30	
Repairing clocks	3 75	
		2,187 66
<i>Carried forward</i>		\$21,141 73

Brought forward \$21,141 73

Street Trees.

Labor	\$7,025 71
Shade trees	570 30
Teaming	338 17
Signs	47 38
Loam	44 00
Bricks, etc.	40 20
Manure	18 00
Rope	11 82
Negatives	5 00
Coal tar	4 00

8,104 58

City Greenhouses.

Labor	\$5,291 19
Repairs, etc., on heating apparatus	747 82
Coal	648 80
Gravel, ashes, cinders and stone	460 00
Water-rates	392 10
Painting	329 88
Manure	301 20
Loam	243 85
Fertilizer	213 00
Teaming	196 50
Bulbs, plants, seeds, etc.	185 57
Mason work	178 00
Lumber, tar-paper	165 66
Telephone rental	121 46
Bricks, sand and cement	110 23
Glass, doors, etc.	88 00
Iron repairs	62 04
Charcoal	30 00
Electric lighting	26 84
Moss	12 50
Ice	7 43
Painting smokestack	5 00
Asbestos cement	3 75
Repairing clock	3 00
Tobacco stems	3 00
Coal for carpenter shop	20 93
Plumbing repairs in stable	27 45
Furnishings for little old house	71 10

9,946 30

Storage Lot.

Labor and teaming	405 50
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Carried forward \$39,598 11

Brought forward \$39,598 11

Nursery and Cold Frames.

Labor	\$2,606 35
Rental	375 00
Hot-bed sash	369 00
Plants	114 00
Manure	69 00
Hay for covering	60 87
Teaming	59 50
Loam	56 50
Flower-seed	27 20
Sand	3 50

3,740 92

Boston Common.

Labor	\$8,705 04
Sod	1,603 53
Teaming	1,199 50
Red gravel	682 50
Grass-seed	335 46
Mason work	240 00
Electrical improvements in office	203 35
Telephone rental	173 40
Lumber	143 43
Canada hardwood ashes	100 00
Sanitary improvements, tool-house	98 57
Rustic fence, deer park	60 00
Sand, cement, pipe, etc., frog pond, ...	43 19
New stove, and repairs on old stove, ...	47 40
Cleaning office	39 00
Blue clay	37 50
Stone for frog pond	31 22
Coal	28 16
Loam	28 00
Towel supply	21 00
Ice	11 55
Slate	9 25
Plumbing repairs	8 55
Directory	5 50
Electric lighting	3 99
Iron repairs	3 74

\$13,862 83

Cleaning out Frog Pond.

Labor	\$495 00
Teaming	178 50

673 50

14,536 33

Carried forward \$57,875 36

Brought forward \$57,875 36

Public Garden.

Labor	\$11,263 84
Plants, roses, shrubs, etc.	1,020 50
Teaming	804 97
Bulbs	947 99
Sod	843 69
Red gravel	642 57
Manure	448 81
Gray gravel	295 00
Canada hardwood ashes	212 84
Loam	128 24
Grass-seed	118 27
Sheep manure	111 16
Mason work	52 00
Vase	36 00
Cotton cloth for covering	35 35
Flower-seed	29 63
Lumber	24 49
Blue clay	22 50
Repairs on fountain	18 60
Sand	14 25

\$17,070 70

Cleaning out Large Pond.

Labor, removing snow	\$1,025 84
Labor	340 00
Teaming	153 00

1,518 84

18,589 54

Massachusetts Avenue.

Labor	\$655 00
Fertilizers	87 76
Red gravel	70 00
Teaming	57 00
Grass-seed	48 65

918 41

Blackstone Square.

Labor	\$530 00
Sod and grass-seed	55 28
Loam	19 50
Teaming	18 75
Fertilizer	13 95
Red gravel	7 00

644 48

Carried forward \$78,027 79

Brought forward \$78,027 79

Franklin Square.

Labor	\$532 00
Sod and grass-seed	55 28
Teaming	18 75
Loam	18 00
Fertilizer	13 95

637 98

Worcester Square.

Labor	\$225 00
Teaming	22 00
Grass-seed	13 73
Loam	12 50
Flower-seed	8 58
Fertilizer	4 77

286 58

Concord Square.

Labor	\$165 00
Bulbs	60 00
Manure	13 77
Flower-seed	5 85
Loam	6 00

250 62

Rutland Square.

Labor	\$165 00
Bulbs and plants	50 10
Manure	9 00
Loam	6 00
Fertilizer	4 77

234 87

Copley Square.

Labor	\$348 00
Loam	15 00
Team	10 50
Fertilizer	6 36

379 86

Union Square.

Labor	\$189 00
Teaming	16 50
Grass-seed	14 70
Loam	14 00
Fertilizer	4 77

238 97

Carried forward \$80,056 67

Brought forward \$80,056 67

Washington Square.

Labor	\$174 00	
Bulbs and plants	55 00	
Manure	19 77	
Loam	6 00	
Teaming	4 50	
		259 27

City Hall.

Labor	\$164 00	
Sod	22 41	
Loam	20 00	
Teaming	15 00	
		221 41

Park Square.

Labor	\$106 00	
Plants	10 00	
Sods	4 50	
		120 50

Lowell Square.

Labor	\$136 00	
Manure	4 77	
		140 77

Waltham Square.

Labor	\$129 00	
Teaming	6 00	
Fertilizer	80	
		135 80

Berwick Park.

Labor	\$81 00	
Bulbs	30 00	
Fertilizer	12 18	
Teaming	9 00	
Loam	6 00	
		138 18

St. Stephen's Square.

Labor	\$40 00	
Teaming	22 00	
		62 00

Carried forward \$81,134 60

Brought forward \$81,134 60

SOUTH BOSTON DISTRICT.

Independence Square.

Labor	\$852 00	
Teaming	27 00	
Grass-seed	18 00	
Fertilizer	12 00	
		909 00

Telegraph Hill.

Labor	\$787 00	
Grass-seed	131 37	
Teaming	36 00	
Fertilizer	18 00	
Repairing hydrant	16 75	
Loam	15 00	
		1,004 12

Lincoln Square.

Labor	\$470 00	
Bulbs and plants	75 00	
Fertilizers	27 36	
Teaming	18 00	
Loam	9 00	
		599 36

Commonwealth Park.

Labor	\$88 00	
Teaming	6 00	
		94 00

EAST BOSTON DISTRICT.

Central Square.

Labor	\$425 00	
Bulbs	90 00	
Fertilizer	30 36	
Teaming	30 00	
Loam	17 00	
Grass-seed	13 12	
Sand	3 16	
		608 64

Prescott Square.

Labor	\$209 00	
Team	12 50	
<i>Carried forward</i>	\$221 50	\$84,349 72

<i>Brought forward</i>	.	.	.	.	.	\$221 50	\$84,349 72
Loam	.	.	.	.	.	8 00	
Manure	.	.	.	.	.	6 00	
Grass-seed	.	.	.	.	.	4 87	
							240 37

Belmont Square.

Labor	.	.	.	.	.	\$395 00	
Fertilizer	.	.	.	.	.	30 36	
Bulbs	.	.	.	.	.	30 00	
Teaming	.	.	.	.	.	27 50	
Loam	.	.	.	.	.	17 00	
Grass-seed	.	.	.	.	.	12 30	
							512 16

Putnam Square.

Labor	.	.	.	.	.	\$185 00	
Teaming	.	.	.	.	.	12 50	
Loam	.	.	.	.	.	5 00	
Grass-seed	.	.	.	.	.	4 50	
							207 00

Maverick Square.

Labor	.	.	.	.	.	\$275 00	
Bulbs	.	.	.	.	.	30 00	
Teaming	.	.	.	.	.	20 00	
Fertilizer	.	.	.	.	.	15 18	
Loam	.	.	.	.	.	11 00	
Grass-seed	.	.	.	.	.	1 63	
							352 81

CHARLESTOWN DISTRICT.

City Square.

Labor	.	.	.	.	.	\$328 00	
Bulbs and plants	.	.	.	.	.	49 00	
Teaming	.	.	.	.	.	21 00	
Fertilizers	.	.	.	.	.	18 36	
Loam	.	.	.	.	.	12 00	
Grass-seed	.	.	.	.	.	2 48	
							430 84

Winthrop Square.

Labor	.	.	.	.	.	\$376 00	
Bulbs and plants	.	.	.	.	.	79 00	
Repairing fence	.	.	.	.	.	62 07	
Mason work	.	.	.	.	.	24 00	
Repairing statue	.	.	.	.	.	21 63	

<i>Carried forward</i>	.	.	.	.	.	\$562 70	\$86,092 90
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<i>Brought forward</i>	.	.	.	.	\$562 70	\$86,092 90
Teaming	.	.	.	.	21 00	
Fertilizers	.	.	.	.	18 36	
Loam	.	.	.	.	16 00	
Grass-seed	.	.	.	.	7 45	
						625 51

Sullivan Square.

Labor	.	.	.	.	\$395 00	
Repairing fence	.	.	.	.	110 18	
Teaming	.	.	.	.	36 00	
Plumbing repairs	.	.	.	.	21 35	
Loam	.	.	.	.	12 00	
Mason work	.	.	.	.	12 00	
Grass-seed	.	.	.	.	10 17	
						596 70

Bunker Hill Square.

Labor	.	.	.	.	\$144 00	
Teaming	.	.	.	.	20 00	
Loam	.	.	.	.	7 00	
						171 00

Essex Square.

Labor	.	.	.	.	\$150 00	
Bulbs	.	.	.	.	20 80	
Teaming	.	.	.	.	7 50	
Fertilizer	.	.	.	.	6 18	
Loam	.	.	.	.	4 00	
						188 48

DORCHESTER DISTRICT.

Meeting-House Hill.

Labor	.	.	.	.	\$196 00	
Sod and grass-seed	.	.	.	.	40 55	
Red gravel	.	.	.	.	21 00	
Gray gravel	.	.	.	.	12 00	
Teaming	.	.	.	.	12 00	
						281 55

Eaton Square.

Labor	.	.	.	.	\$156 00	
Bulbs and plants	.	.	.	.	55 00	
Teaming	.	.	.	.	15 00	
Sod	.	.	.	.	15 00	
Fertilizer	.	.	.	.	10 77	
<i>Carried forward</i>	.	.	.	.	\$251 77	\$87,956 14

<i>Brought forward</i>	.	.	.	.	\$251 77	\$87,956 14
Mason work	.	.	.	.	8 00	
Loam	.	.	.	.	6 00	
						265 77

Mt. Bowdoin Green.

Labor	.	.	.	.	\$237 00	
Bulbs and plants	.	.	.	.	45 00	
Teaming	.	.	.	.	25 00	
Fertilizer	.	.	.	.	12 18	
Loam	.	.	.	.	6 00	
						325 18

Dorchester Town Field.

Labor	.	.	.	.	.	160 00
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Magnolia Street.

Labor	.	.	.	.	\$110 00	
Loam	.	.	.	.	6 25	
Teaming	.	.	.	.	3 00	
						119 25

Adams Square.

Labor	.	.	.	.	.	120 00
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Richardson Square.

Labor	.	.	.	.	\$506 80	
Teaming	.	.	.	.	1,359 50	
Loam	.	.	.	.	100 00	
Grass-seed	.	.	.	.	66 60	
Fertilizer	.	.	.	.	66 00	
						2,098 90

Peabody Square.

Labor	.	.	.	.	\$104 00	
Teaming	.	.	.	.	6 00	
						110 00

Tremlett Park.

Labor	.	.	.	.	\$104 00	
Fertilizer	.	.	.	.	6 00	
Teaming	.	.	.	.	6 00	
Loam	.	.	.	.	5 00	
Grass-seed	.	.	.	.	1 33	
						122 33

<i>Carried forward</i>	.	.	.	.	.	\$91,277 57
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Brought forward \$91,277 57

Algonquin Square.

Labor	\$155 00
Bulbs and plants	24 00
Teaming	6 00
Loam	3 00
Manure	3 00

191 00

ROXBURY DISTRICT.

Washington Park.

Labor	\$752 00
Sod and grass-seed	62 04
Teaming	51 00
Manure	48 00
Loam	40 00

953 04

Madison Park.

Labor	\$552 00
Teaming	43 00
Loam	31 00
Manure	30 00
Grass-seed	18 00

674 00

Orchard Park.

Labor	\$433 00
Teaming	25 00
Grass-seed	22 21
Loam	20 00
Manure	18 55

518 76

Bromley Park.

Labor	\$263 00
Teaming	20 50
Sod	19 50
Loam	7 50
Manure	7 50

318 00

Fountain Square.

Labor	\$235 00
Sod	19 50
Teaming	15 00
Manure	4 50
Loam	4 00

278 00

Carried forward \$94,210 37

Brought forward \$94,210 37

Cedar Square.

Labor	\$196 00	
Teaming	12 00	
Loam	5 00	
Grass-seed	4 94	
Manure	4 50	
		222 44

Longwood Park.

Labor	\$148 00	
Teaming	6 00	
		154 00

Lewis Square.

Labor	\$118 00	
Teaming	6 00	
		124 00

Walnut Park.

Labor	\$111 00	
Teaming	6 00	
		117 00

Linwood Park.

Labor	\$136 00	
Loam	8 00	
Manure	7 50	
Teaming	3 00	
		154 50

Centre Street.

Labor	\$93 00	
Teaming	3 00	
		96 00

Warren Street.

Labor		117 00
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Fellows-street Playground.

Labor	\$217 12	
Gravel	240 00	
Loam	188 09	
Shrubs	60 00	
Manure	36 00	
Teaming	3 00	
		744 21

Soldiers' Monument Lot.

Labor		84 00
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Carried forward \$96,023 52

Brought forward \$96,023 52

BRIGHTON DISTRICT.

Brighton Square.

Labor	\$224 00	
Teaming	23 00	
Plants	23 00	
Manure	19 00	
		289 00

Jackson Square.

Labor	\$224 00	
Teaming	15 00	
Bulbs	15 00	
Manure	12 00	
Loam	4 00	
		270 00

Rogers Park.

Labor	\$423 00	
Fertilizers	39 36	
Teaming	27 00	
		489 36

Fern Square.

Labor	\$166 00	
Plants	12 00	
Teaming	9 00	
		187 00

Total		\$97,258 88
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SPECIAL APPROPRIATIONS.

Playground, Fellows Street.

Labor	\$832 88	
Teaming	157 00	
Lumber	147 75	
Loam	91 91	
Gray gravel	88 00	
Sod	45 00	
Masonry	40 88	
Pipe and fittings	37 74	
Bricks, cement, etc.	35 80	
Cinders	23 00	
Small supplies	10 00	
		\$1,509 96

Highland Park.

Painting windows	10 00	

<i>Carried forward</i>		\$1,519 96
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<i>Brought forward</i>	\$1,519 96
<i>Entrance to Orchard Park, from Adams Street.</i>	
Land purchased	5,890 00
<i>Square, Bunker Hill, Vine and Moulton Streets, Improvement of.</i>	
Cut-granite curbing	521 00
<i>Square, Cambridge, Murdock and Sparhawk Streets.</i>	
Land purchased	5,000 00
	\$12,930 96

As a convenient reference, I append the following list of the seventy parks and squares which are in charge of the Department of Public Grounds, showing their respective localities and superficial areas:

CITY PROPER.

- Common.* — Park, Tremont, Boylston, Charles and Beacon streets; contains $48\frac{2}{5}$ acres;¹ enclosed by an iron fence.
- Public Garden.* — Charles, Boylston, Arlington and Beacon streets; contains $24\frac{1}{4}$ acres; enclosed by an iron fence.
- Fort Hill Square.* — Oliver and High streets; contains 29,480 sq. ft.
- Franklin Square.* — Washington, East Blackstone, East Newton and James streets; contains 105,205 sq. ft.
- Blackstone Square.* — Washington, West Brookline, West Newton streets and Shawmut avenue; contains 105,100 sq. ft.
- Massachusetts Avenue.* — Between Albany street and Harrison avenue; contains 9,300 sq. ft.
- Massachusetts Avenue.* — Between Harrison avenue and Washington street; contains 13,050 sq. ft.
- Massachusetts Avenue.* — Between Washington and Tremont streets; contains 74,000 sq. ft.; malls enclosed by an iron fence.
- Massachusetts Avenue.* — Between Tremont street and Columbus avenue; contains 10,150 sq. ft.
- Concord Square.* — Between Tremont street and Columbus avenue; contains 5,000 sq. ft.
- Rutland Square.* — Between Tremont street and Columbus avenue; contains 7,400 sq. ft.
- Berwick Park.* — Off Columbus avenue, near N. Y., N. H. & H. R.R.; contains 3,800 sq. ft.; enclosed by granite curb.
- Greenwich Park.* — Off Columbus avenue; contains 4,100 sq. ft.; enclosed by granite curb.

¹ Exclusive of cemetery, containing one and two-fifths acres.

Union Park. — Between Tremont street and Shawmut avenue; contains 16,000 sq. ft.; malls enclosed by iron fence.

Worcester Square. — Between Washington street and Harrison avenue; contains 16,000 sq. ft.

Lowell Square. — Cambridge and Lynde streets; contains 5,772 sq. ft.; enclosed by iron fence.

Park Square. — Columbus avenue, Eliot and Pleasant streets; contains 2,867 sq. ft.

Montgomery Square. — Tremont, Clarendon and Montgomery streets; contains 550 sq. ft.

Pemberton Square. — Between Tremont row and Somerset street; contains 3,390 sq. ft.

Copley Square. — Between Huntington avenue, Boylston and Dartmouth streets; contains 28,399 sq. ft.; enclosed by a granite curb.

Between Huntington avenue, Trinity place, and St. James avenue; contains 5,410 sq. ft.; enclosed by a granite curb.

City Hall Grounds. — School street; contains 7,700 sq. ft.

Square. — Harrison avenue, between Union Park and Waltham streets; contains 3,000 sq. ft.

St. Stephen's Square. — At the corner St. Stephen's and Bata-via streets; contains 100 sq. ft.

SOUTH BOSTON.

Telegraph Hill. — Thomas Park; contains 190,000 sq. ft.

Independence Square. — Broadway, Second, M and N streets; contains $6\frac{1}{2}$ acres; enclosed by an iron fence.

Lincoln Square. — Emerson, Fourth and M streets; contains 9,510 sq. ft.; enclosed by an iron fence.

Commonwealth Park.

EAST BOSTON.

Maverick Square. — Sumner and Maverick streets; contains 4,398 sq. ft.; enclosed by stone curb.

Central Square. — Meridian and Border streets; contains 40,310 sq. ft.; enclosed by stone curb.

Belmont Square. — Webster, Sumner, Lamson and Seaver streets; contains 30,000 sq. ft.; enclosed by an iron fence.

Putnam Square. — Putnam, White and Trenton streets; contains 11,628 sq. ft.; enclosed by an iron fence.

Prescott Square. — Trenton, Eagle and Prescott streets; contains 12,284 sq. ft.

ROXBURY DISTRICT.

Madison Square. — Sterling, Marble, Warwick and Westminster street; contains 122,191 sq. ft.

Orchard Park. — Chadwick, Orchard Park and Yeoman streets; contains 104,492 sq. ft.

- Washington Park.*—Dale and Bainbridge streets; contains 396,125 sq. ft.
- Longwood Park.*—Park and Austin streets; contains 21,000 sq. ft.
- Walnut Park.*—Between Washington street and Walnut avenue; contains 5,736 sq. ft.
- Lewis Park.*—Highland street and Highland avenue; contains 5,600 sq. ft.
- Bromley Park.*—From Albert to Bickford street; contains 20,975 sq. ft.; three enclosures.
- Fountain Square.*—Walnut avenue, from Munroe to Townsend street; contains 116,000 sq. ft.
- Cedar Square.*—Cedar street, between Juniper and Thornton streets; contains 26,163 sq. ft.
- Linwood Park.*—Centre and Linwood streets; contains 3,625 sq. ft.; enclosed by stone curb.
- Public Ground.*—Centre and Perkins streets; contains 3,200 sq. ft.
- Highland Park.*—Fort Hill avenue; contains 114,065 sq. ft.
- Public Ground.*—Warren, James and Regent streets; contains 1,380 sq. ft.; enclosed by granite curb.
- Public Ground.*—Junction of Huntington avenue, Tremont and Francis streets; contains 1,662 sq. ft.
- Playground.*—Fellows street, between Hunneman street and Fellows place; contains 25,000 sq. ft.
- Square.*—Albany street, near mall.

DORCHESTER DISTRICT.

- Dorchester Square.*—Meeting-House Hill; contains 56,200 sq. ft.; Soldiers' monument on this square.
- Eaton Square.*—Adams and Bowdoin streets; contains 13,280 sq. ft.
- Mt. Bowdoin Green.*—Top of Mt. Bowdoin; contains 25,170 sq. ft.
- Richardson Square.*—Between Pond and Cottage streets; contains 75,982 sq. ft.
- Public Ground.*—Magnolia street; contains 3,605 sq. ft.
- Public Ground.*—Dorchester Field;¹ contains 274,000 sq. ft.
- Public Ground.*—Adams street, near Pierce avenue; contains 2,068 sq. ft.
- Public Ground.*—Adams street, near Cedar Grove Cemetery; contains 700 sq. ft.
- Algonquin Square.*—Algonquin and Bradlee streets; contains 1,728 sq. ft.
- Tremlett Park.*—Tremlett street, between Hooper and Waldeck streets; contains 7,107 sq. ft.

¹ Property Gibson School Fund.

CHARLESTOWN DISTRICT.

City Square.—Head of Bow and Main streets; contains 8,739 sq. ft.; enclosed by stone curb and iron fence.

Public Ground.—Water street, Charles-river avenue and Warren avenue; contains 3,055 sq. ft.; enclosed by a stone curb.

Sullivan Square.—Main, Cambridge, Sever and Gardner streets; contains 56,428 sq. ft.

Winthrop Square.—Winthrop, Common and Adams streets; contains 38,450 sq. ft.; enclosed by an iron fence; Soldiers' monument on this square.

Public Ground.—Essex and Lyndeboro' streets; contains 930 sq. ft.

Public Ground.—Bunker Hill and Vine streets; contains 4,484 sq. ft.

WEST ROXBURY DISTRICT.

Soldiers' Monument Lots.—South and Centre streets; contains 5,870 sq. ft.

Public Ground.—Top of Mt. Bellevue; contains 27,772 sq. ft.

BRIGHTON DISTRICT.

Public Ground.—Pleasant and Franklin streets; contains 1,900 sq. ft.

Jackson Square.—Chestnut Hill avenue, Union and Winship streets; contains 4,300 sq. ft.; enclosed by stone curb.

Brighton Square.—Between Chestnut Hill avenue and Rockland street, and opposite branch of Public Library; contains 25,035 sq. ft.

Franklin Square.—Between Franklin and Fern streets; contains 1,900 sq. ft.

Rogers Park.—Foster street; contains 7 acres.

Square.—Cambridge, Brighton and Murdock streets; contains 7,449 sq. ft.

Greenhouses and Nursery Grounds.—Between Massachusetts avenue and East Cottage street, Dorchester; contains 102,531 sq. ft.

Storehouse Grounds.—Massachusetts avenue, adjoining location of N.Y., & N.E. R.R.; contains 96,375 sq. ft.



ANNUAL REPORT
OF THE
REGISTRY DEPARTMENT
FOR THE YEAR 1897.

BOSTON, June 6, 1898.

HON. JOSIAH QUINCY,

Mayor of the City of Boston:

SIR: In compliance with the ordinance, I beg leave to report that, according to our books, there were recorded for the year 1897,

16,973 births { including 280 children of parents usually residing out of this city.
34 born out of town of Boston parents.

6,790 intentions of marriage.

6,062 marriages solemnized in this city.

846 marriages of citizens married elsewhere in the State, including 115 marriages of citizens married out of the State.

11,170 deaths.

640 still-born children.

As compared with previous years :

	1893.	1894.	1895.	1896.	1897.
Births .	14,602	15,401	15,613	16,484	16,973
Intentions .	6,564	6,251	6,799	7,043	6,790
Marriages .	5,755	5,464	5,932	6,318	6,062
Deaths .	11,713	11,531	11,331	11,650	11,170

LEGISLATION.

As chapter 444 of Acts of 1897 only came into effect on January 1, 1898, it is too soon to decide upon its practical working. The provision for obtaining the maiden names of mothers in returns of births and deaths has been vigorously enforced. After the usual misunderstandings and complaints over any change in the law, I am happy to report that physicians generally have done their best to comply with it. Still many blanks must remain unfilled. As to deaths, the law was not new, but I cannot feel the same confidence that the returns are accurate.

Two new acts passed by the Legislature in 1898 are printed in the appendix. Chapter 389 provides for official seals for the city registrar of Boston and for the clerks of towns, such seals to be used for attesting copies of records. This act does not go into effect until January 1, 1899.

Chapter 510 of 1898, inflicts a penalty upon certain officials if they do not use in certain cases the standard ink, approved by the Secretary of the Commonwealth. It is to be hoped that the result will justify the law, and that it will be as faithfully tried in other places as it certainly will be in this office.

Other necessary legislation has failed to receive the approval of the Legislature. An act in regard to legal names and to changes in the Christian names of children, was rejected.

Although there seems to be no law to authorize the removal of entirely fictitious returns from the records of births, deaths and marriages, no relief was granted. I especially regret the loss of a bill providing for a special census in Boston, to record statistics respecting the families of present residents. As the Boston births are missing for the century prior to 1849, it seems most desirable to allow affidavits to be made by persons now living, and aged over fifty years, as to their parents, brothers and sisters and wives. Every year suffered to pass before the enactment of such a law, destroys a mass of evidence.

In the immediate future it will be necessary to enter upon a large measure of copying our defective records. The ink used in the early seventies is rapidly fading from the pages, and copies must be made. But the difficulty of doing this, either under civil-service rules or by contract, is very great, both as to the obtaining of suitable copyists and as to the cost.

I must renew my suggestion that the present law concerning the obtaining of death records is very defective, and should be amended.

PUBLICATIONS OF ANCIENT RECORDS.

Ten months ago I reported that two volumes of the Record Commissioners' Reports were in the printers' hands. Neither has yet been issued, the preparation and printing of the indices having required an unusual length of time. The second volume of Marriages (1751-1800) has been sent to the printer, and good progress has been made. About one-third of Aspinwall's Note Book is in type, but work on this is necessarily slow, the composition and proof-reading both calling for extreme accuracy. The volume of Suffolk Court Records has not yet advanced beyond the copy for the press.

FINANCIAL STATEMENT OF THE REGISTRY DE-
PARTMENT FOR THE YEAR ENDING JANUARY
31, 1898.

Boston, February 26, 1898.

HON. JOSIAH QUINCY,

Mayor of the City of Boston :

I beg leave to make the following report of the finances of this department, as the detailed account of the work cannot be completed for several weeks.

FINANCIAL STATEMENT.

Cash on hand February 1, 1897 (City Doc. No. 55)	\$265 50
Appropriation for 1897	30,000 00
	\$30,265 50

Receipts.

Received for Marriage Licenses, from February 1, 1897, to January 31, 1898, inclusive :

Nos. 522 @ 6,790, of 1897, = 6,269 certificates
Nos. 1 @ 494, of 1898, = 494 "

6,763 " @ 50 c =

3,381 50

\$33,647 00

Expenditures.

Salaries regular employees	\$20,612 88
Collecting births of 1895	1,791 49
Binding records in office	1,220 48
Printing and stationery	1,319 88
Sundries	1,053 85
Transfer by Auditor January, 1898	4,001 42
	\$30,000 00

Carried forward \$30,000 00

<i>Brought forward</i>	\$30,000 00
Paid physicians for 12,905 births at 25c., re- ported from February 1, 1897, to February 1, 1898, as per vouchers paid in by me to the Auditor, viz. :	
February 1 to June 30, 1897	\$1,115 00
July 1 to October 31, 1897	1,053 50
November 1, 1897, to February 1, 1898	1,057 75
	3,226 25
Cash paid City Collector, per voucher Novem- ber 5, 1897	300 00
	\$33,526 25
Cash balance February 1, 1898	120 75
	<u>\$33,647 00</u>

Respectfully submitted,

WILLIAM H. WHITMORE,

City Registrar.

APPENDICES.

APPENDIX A

NOTEWORTHY PERSONS WHO DIED IN BOSTON IN 1897.

DATE OF DEATH.		AGE.
1897.		
Jan.	1 Susan E. Page	80
	1 Hannah Connolly	85
	1 Charles F. Guild (Naval Officer)	53
	1 Mitchell Lawrence	77
	2 John Woods	80
	2 William G. Wells (Rev.)	63
	2 Ellen Leary	80
	2 Paul Tenney	80
	3 Mary McKee	79
	3 Seth W. Merrill	76
	5 Lucy Whittier	86
	5 Francis A. Walker (President M.I.T.)	56
	5 Henry V. Degen (Rev.)	83
	6 Catharine Jenkins	84
	6 Victor Blutmann (Teacher)	60
	7 Thomas Hussey	83
	7 Emily A. Bruce (M.D.)	60
	7 William S. Beaumont (M.D.)	31
	7 Hannah M. Beck	81
	8 Winsor Gleason	80
	8 Lucy Goddard	92
	8 Mary Sullivan	83
	9 George Waugh (Rev.)	66
	9 Edward E. Clextan (Rev.)	34
	9 Benjamin S. Calef	61
	9 Munroe Ayer	75
	10 Casper Crowninshield	59
	10 Bridget Russell	90
	11 Evelina E. Slack	76
	12 Francis W. Ryder	75
	13 John L. Chenery	78
	13 Phebe S. Dunham	81
	13 John F. M. Brown	80
	13 Susan F. Webber	80
	14 Ann Maguire	96
	14 William Vogel	77
	15 George W. Goldsmith	81
	15 James McMahon	85
	15 Chauncey K. Bullock (ex-Councilman)	58
	17 Lydia H. Shores	90
	17 Ruth A. Bubier	79
	18 Catherine Lally	87
	19 Arthur D. Phelps	79
	19 Samuel W. Walker	82
	19 William W. Stickney	74
	20 Catherine Garney	82
	20 Elizabeth Haggerty	85
	20 Michael Oates (Rev.)	57
	21 Lucia A. D. Long	81
	21 Marianne M. Ellison	81
	21 Mary Faxon	90
	23 Frances A. Browne	79
	25 Lydia B. Hutchings	75
	25 Ellen Kinworthy	80

DATE OF DEATH.

AGE.

1897.

Jan.	26	Thomas B. Dean	78
	26	Frederick W. Schreider	78
	26	Miranda S. Emery	83
	27	Mary S. King	85
	27	Nancy S. Vose	86
	27	Charles J. Vaughn (Paymaster.)	52
	27	Morgiana M. McKenney	77
	28	Susan M. Clarke	84
	28	Mary Bennett	78
	28	James Egan	77
	29	Frances Lynch	83
	29	Eliza M. Payne	82
	29	Sally P. Meserve	97
	29	Eugene O'Neil (ex-Policeman)	74
	29	Isaac Lewis	86
	29	Anna S. Cameron (Teacher)	50
	30	Thomas J. Whidden	79
	30	Ruhannah V. A. Brigham	88
	31	Catharine McHale	83
	31	Clara C. Cummings	92
	31	James H. Nugent (ex-Alderman)	64
	31	Marks Pettee	81
Feb.	1	George Everett	75
	1	Laura A. Loring	88
	1	Paolo Zerga	82
	1	Mary W. Brown	82
	1	Leonard Pickering	83
	3	Tabitha R. Simpson	81
	3	Cornelius I. Wilby	81
	3	Martha T. Estabrooks	79
	3	Stillman A. Cole (M.D.)	57
	4	Robert Howarth	80
	4	Lydia B. Jenks	85
	5	Dennis Griffin	83
	5	Sarah Isaacs	84
	6	George Lyon	77
	6	Catherine Vickers	80
	6	Samuel Davenport	79
	7	Ann Bryson	90
	7	Johanna Johnson	85
	8	Martha A. Hall	81
	8	Edgar Lincoln	67
	9	George Patterson	88
	9	Thomas Keyes	72
	10	Henry Blanchard (M.D.)	85
	10	Mary S. Edmunds	79
	10	Sarah Blood	82
	10	Martin King	96
	11	Sarah L. Rowell	88
	11	Archibald McLean	87
	12	Eliza P. Holden	85
	12	Harriet A. Seaward	84
	12	Greeley S. Curtis	66
	13	Charlotte L. Irving	80
	13	Arad T. Sampson	73
	15	Benjamin K. Brown	75
	16	Alonzo Andrews	81
	16	Ezekiel R. Jones	79
	17	Lydia A. Atwood	79
	18	Charles Le Row	87
	18	Betsey D. Rich	81

REGISTRY DEPARTMENT.

11

DATE OF DEATH.		AGE.
1897.		
Feb.	18 Sarah W. Hollister	84
	19 Philena Tenney	84
	19 Prudence S. Emery	78
	19 Sylvanus S. Clark	84
	20 William H. Horton	79
	20 Sarah M. Burr	88
	20 Serena D. Blanchard	82
	20 John Starratt	78
	20 Mary A. Dunn	78
	21 Mary G. Bosworth	80
	21 Mary C. Tappan	74
	21 Mary A. Buffington	80
	21 Carl Shaal	83
	21 William J. Corcoran (Rev.)	58
	21 Mary E. Shute	79
	22 Thaddeus Richardson	87
	22 Emily M. Herrick	88
	22 Robert J. Parker	81
	22 Sarah K. Hunnewell	83
	23 Sarah Rankin	86
	23 Ellen Lawler	84
	23 Bridget Flynn	94
	24 Elizabeth B. Welch	76
	24 William C. Nicholson	68
	25 Sarah Corbett	82
	25 Maria L. Snow	79
	25 Mary H. Furness	93
	26 Thomas W. Ricker	84
	26 Charles E. Allen	81
	26 Caroline Furness	88
	27 Isaac Wilder	80
	27 Samuel H. Jackson (M.D.)	52
	28 Nicholas Fardy	82
March	1 Leah Hale	81
	1 John J. Corcoran	83
	1 Margaret O'Brien	85
	2 Nancy Kilburn	87
	3 Dennis McCarthy	80
	3 David Foster	86
	4 Sarah C. Noyes	92
	4 Charles Rollins	84
	4 Edward Gallagher	78
	4 William A. Start	60
	5 Edward H. Pleadwell	94
	5 Ann Goodnow	86
	5 Lydia W. Taggert	88
	6 Abraham Goulston (Rev.)	94
	6 Hannah Hurley	88
	6 Aaron L. Herzberg (Teacher)	52
	6 Anna DeW. Fuller	78
	7 Mary Horgan	96
	7 Esther Benshimol	88
	7 Cyrus C. Atwell	80
	7 Salathiel N. Crossman	83
	7 John D. Lilley	70
	8 John Lapraik (M.D.)	38
	8 Thankful Whittier	82
	9 Mary Goodwin	87
	10 Mary A. Ellis	87
	10 Edwin Rice	82
	11 Sarah J. Yeaton	88

REGISTRY DEPARTMENT.

13

DATE OF DEATH.

AGE.

1897.

April	10	Tryphosa P. Hebard	80
	12	Eunice Sterling	80
	12	John Larnard	80
	13	Harvey D. Hadlock (Lawyer)	53
	13	Ephraim W. Bouve	80
	13	John Orvis	80
	13	Sherman S. Case	88
	13	Hannah Giduz	80
	14	Ann G. Smith	85
	14	Maria F. Goodwin	78
	15	Israel Farrar	82
	15	Mary F. Rea	83
	16	William Glennon	85
	17	Phebe M. Holden	84
	17	Harriet Taber	94
	17	Henry D. Hyde (Lawyer)	58
	17	Margaret Seitz	85
	18	Nathan Hallett	82
	20	Thomas Williams	80
	21	Sarah J. Stevens	83
	21	Ann MacLellan	79
	22	James B. Clapp	84
	22	Samuel B. Livermore	90
	22	Nora Coughlin	85
	22	Susan M. Tucker	80
	23	Laura S. Cushing	78
	23	Elizabeth Mahoney	80
	24	Eliza A. Templeman	82
	24	Albert E. Proctor	70
	25	Lucy B. Lee	86
	26	Catherine McLaughlin	90
	26	Lucy L. Cutler	79
	26	Oliver Crocker	78
	27	Jeremiah Doherty	83
	27	Weston Winch	80
	27	Hannah Getchell	81
	28	Charles C. Andrews	78
	29	Elizabeth McCracken	83
	29	George B. Tilden	74
	30	John Hannon	85
May	1	John W. Gillespie	90
	2	Fanny Picchi	83
	2	Winifred Foley	88
	4	Lucinda M. Bowditch	84
	5	Sarah Garrity	80
	5	Peter Peterson	87
	5	Edmund Noonan	83
	6	J. Pierson Monroe (M.D.)	30
	7	Mary Kelly	89
	7	Julia Holloran	86
	7	Maria P. Rice	82
	8	John C. Paige (Insurance Agent)	54
	9	John H. Packard (Lawyer)	41
	10	Luke Foley	91
	10	Joseph T. Paget	52
	11	William Cogan	80
	11	Caroline A. Parker	79
	11	Mary E. Leary	83
	11	Mary A. Ayer	83
	11	George F. Daniels (Rev.)	38
	12	Louisa M. Swan	86

DATE OF DEATH.

AGE.

1897.

May	12	Eliza Hopps	86
	12	Elizabeth Flynn	82
	12	Bridget Egan	85
	13	Hannah G. Swett	80
	13	John Sparrow	74
	13	Annie L. Dorr	86
	13	George R. Richardson (Trustee)	66
	13	William H. Goodwin	74
	13	Louisa B. Lincoln	80
	14	Isabella Martin	89
	14	Lydia M. Harris	78
	14	Alexander M. Hayward (P. O. Supt.)	56
	14	Robert Kemp	76
	15	Harriet A. Cutter	90
	16	Mary Merrick	80
	16	Almond H. Giles	77
	17	William A. Sanborn	84
	17	John Reade (Undertaker)	72
	18	Jane Cohan	80
	18	Phineas B. Smith (Lawyer)	59
	19	Mary P. King	93
	20	Mark McKenna	84
	21	George W. Maunder	80
	21	Inez F. Penniman (Teacher)	44
	21	Henry B. Simmons	81
	21	Elizabeth Chickey	84
	22	Winslow W. Babbitt	81
	22	Susan L. Bacon	88
	22	Lorenzo S. Fairbanks (Lawyer)	72
	22	Benjamin E. Cotting	84
	23	Mary McCarthy	85
	23	John Thomas	95
	24	Henry F. Spach (ex-Deputy Sheriff)	57
	25	Edwin Merrill	78
	25	Mary F. Lincoln	85
	26	Mary W. Ryan	79
	26	Mary E. Hooton	89
	26	Salome C. Schlotterbeck	87
	26	Thomas Mack	70
	27	Hannah Coburn	85
	28	Catherine McCusker	80
	28	Oliver Welch	82
	30	John O'Neal	80
	31	Ellen Ray	84
	31	Charles C. Nichols	87
	31	Asa F. Pattee (M.D.)	62
June	1	William B. Richardson	92
	1	Charles H. Andrews (Editor).	63
	1	Thomas W. Pillsbury	80
	2	Julia L. Plumb	83
	2	Lucena Palmer	79
	2	Clarissa L. Binney	86
	2	Irving Blaney	79
	2	James Melanphy	84
	2	Morris Fines	80
	3	Lydia M. Heald	80
	4	Maria McCool	82
	5	Charity Green (colored)	105
	8	William H. Mendell (Fire Alarm Telegrapher)	65
	8	James J. Butler	82
	10	Horace L. Collamore	80

DATE OF DEATH.

AGE.

1897.

June	11	Joshua T. Tucker	84
	11	Mary A. Hickey	79
	12	Sarah A. Rugg	84
	12	Helen P. Thomas	79
	12	Sarah F. Brown	78
	13	Bridget Wilson	84
	13	John Sullivan	80
	13	Frederick J. McNulty (M.D.)	62
	14	Joseph S. Fay	84
	15	Cornelius Lee	82
	15	Almarine Trowbridge	85
	15	Mary A. Berry	85
	23	Almira S. Hazeltine (Asst. Hospital Matron)	77
	24	Joseph L. Wells	82
	24	Sarah Atkinson	84
	24	Albert Pope	80
	25	David P. Matthews	81
	25	Isaac Fenno	74
	25	Catherine Baker	85
	28	Eliza M. Pickering	79
July	1	Lucy A. Hatch	80
	1	Marietta L. Sumner	81
	1	Maria P. Cushing	79
	2	James Calnan	95
	2	Mary Lawless	84
	3	Ignatius P. Egan (Rev.)	50
	4	Michael A. Sullivan	83
	5	Hugh Geary	86
	5	Maria Slager	88
	6	Catherine Devlin	80
	7	Elizabeth A. Capen	90
	8	Almon S. Morse	79
	9	Betsey H. Hill	85
	9	Catherine Whitworth	84
	10	John H. C. Tanck	93
	10	Jane T. Metcalf	95
	10	Martha McLean	82
	11	Edwin Locke	83
	12	Bridget Cuddy	95
	13	Mary A. Sheridan	83
	16	Delia Goodwin	84
	16	Sarah E. King	87
	19	Joseph B. Harris	83
	20	John Ahrens	82
	21	Caroline Fowle	90
	22	John C. Hefler	86
	23	Bridget Magee	82
	23	E. Sewall Price	85
	24	Daniel Murphy	85
	24	Rhoda A. Hatch	80
	25	Elizabeth Baxter	82
	26	Dennis Sage	79
	27	Ellen Condon	86
	27	Edward Barlow	87
	29	Patrick I. Grace	80
	29	Edwin Battles	83
	30	Ann D. Rogers	81
	30	Oziba Randall	80
	30	James Conniff	86
	31	Minnie Nelson	90
	31	John Bynner	86

DATE OF DEATH.

AGE.

1897.

July	31	James M. Le Mon	83
Aug.	1	Thomas E. Scott	81
	2	Otis Pease	80
	3	Michael Malladay	100
	4	Robert Gilbert	90
	4	Nora W. Ellard	97
	4	Angeline A. Teade (Missionary)	66
	4	Emeline Brooks	84
	6	Elizabeth Moran	80
	6	Mary Delaney	80
	7	Peter Randolph (Rev.) Colored	72
	9	Mary Kelley	85
	9	Margaret Cruikshank	95
	11	Catherine Scheid	80
	12	Mary R. Grueby	85
	12	John C. Shecklton (Veterinary Surgeon)	47
	13	Thomas M. Wetmore (Lawyer)	48
	15	Rebecca W. Dearborn	87
	16	John McNellis	98
	17	Mary Little	80
	17	Mary E. Wadsworth	82
	18	Frederick N. Cheney	51
	19	Melissa W. Pierce	88
	21	James A. Quinn (M.D.)	24
	21	Maria L. Clark	82
	22	Thomas L. Jowett (Sculptor)	64
	24	Nancy Smith	86
	24	Ellen Finnen	80
	26	Uriah H. Coffin	74
	26	Charlotte T. Smith	90
	26	Anne L. Bigelow	80
	26	Leonard W. Jones	81
	27	Patrick McGaragle	85
	27	Tabitha Merrill	88
	28	Mary Thomas	85
	28	Ann M. Spellman	80
	28	Amy T. Brown	88
	28	Michael Collins	88
Sept.	2	John E. Merrill	78
	3	Aaron H. Bean	83
	3	Joanna Hagerty	87
	3	John P. Stewart (Rev.)	61
	3	Jane Bisset	81
	5	Rachel Hamilton	92
	4	Cornelius Driscoll	81
	4	Abraham Woolf	79
	4	William H. Chessman	74
	4	Wright W. Williams	87
	6	Susan H. Gavett	80
	7	Ann Hicks	89
	8	John S. Rogers	80
	9	Julia Murphy	88
	9	Joseph S. Watson	82
	10	Amelia Nolan	85
	11	Harry Hinman	79
	12	Eliza Holland	91
	12	John Callender (Custodian Bostonian Society)	72
	13	Elijah Learned	86
	13	Mary D. Pierce	81
	14	Mary Fitzgerald	86
	17	Margaret Dolan	91

REGISTRY DEPARTMENT.

17

DATE OF DEATH.

AGE.

1897.

Sept.	19	Ellen Finn	82
	19	John Kelley (Building Inspector)	66
	20	Susan E. Eaton	88
	20	Isaac Dearborn	85
	20	Erastus W. Sanborn	90
	21	Mary Marchbank	85
	21	Sarah J. Bunton	81
	23	William Hammond	81
	23	Mary L. Richmond (M.D.)	79
	23	Mary E. Swan	82
	23	Sarah M. Colby	90
	23	Edward F. Mecuen	82
	24	Mary A. Todd	85
	24	Thomas C. Pazolt	87
	26	William W. Willard	87
	27	Laura A. Harmon	79
	29	Nancy W. B. Mudge	85
	29	Henry A. Dean	84
	29	Honora M. Burke	91
	30	Michael Ward	80
	30	Mary G. Call	82
Oct.	2	Ira L. Moore (M.D.)	72
	2	James Morse	82
	2	Marcella Plunkett	79
	2	Joseph Proctor (Actor)	81
	3	John Reisert	85
	3	Sally Aldrich	96
	4	Hannah Scally	83
	4	Phebe W. Emerson	79
	5	Salome Wood	89
	5	Hannah Allan	87
	5	Mary A. McIntosh	87
	7	Antipas Newton	80
	8	Sabrina K. Aldrich	85
	8	Mary Jacobs	92
	10	Priscilla P. Mansfield	94
	10	John Pierce (Assessor)	62
	10	Hannah Doherty	80
	12	Charles Gilbert	80
	13	Frances B. James	83
	13	Eliza A. Gorham	90
	13	Samuel B. Holmes	82
	15	Henry C. Myers	85
	15	Cecilia W. Doudiet	81
	17	Israel S. Trafton	78
	17	Martin F. Brigham	88
	17	Betsey N. Baker	78
	18	Ellen Loftus	82
	19	John Foster (Professor)	86
	20	Betsey D. Haselton	90
	20	Gardner S. Cheney (Druggist)	69
	21	Paula Vacarezza	81
	21	Jane Anderson	90
	21	Jane B. Doe	82
	21	Samuel T. Cobb (Editor)	72
	24	Carmalo Soracio	85
	24	Mary Learned	82
	25	Keziah G. Arnold	81
	27	John H. Ellis (Veterinary Surgeon)	69
	29	Alonzo Josselyn	70
	29	William G. Harris	69

DATE OF DEATH.

AGE.

1897.

Oct.	29	George F. Suck	77
	31	Mary E. Parmlee	79
	31	Mary A. Grafton	80
	31	Clarissa S. Holland	88
Nov.	1	Ellen Kelley	85
	1	Harriet T. Ward	78
	1	Mary A. Batchelder	57
	2	Albert J. Pratt (Lawyer)	40
	4	James L. Ditson	84
	4	George Bradford	88
	4	Johannah Peterson	81
	6	George S. Curtis	88
	6	Julia B. H. James	86
	7	Charles Chadbourne	85
	8	Lucy H. Dexter	87
	9	Rosanna Hammond	83
	15	Bridget Powers	80
	15	Catherine Coughlin	80
	15	Adelia H. Collins	85
	15	Abby L. Bennett	82
	16	Mary A. Connelly	80
	16	Henry W. Matthes	78
	17	Oliver O. Austin	82
	17	Sarah H. Lane	87
	18	Seviah B. Wetherbee	80
	18	Ruth E. Clark	79
	18	Hiram Whitman	83
	18	William Nicholls	82
	18	Ellen Healy	90
	19	Mary A. Robinson	84
	19	Edward R. Hall	77
	19	Conrad Stoeckel	87
	20	Mary Carey	80
	21	Horace T. Field	78
	22	William Patterson	89
	22	Mary Quinn	90
	23	Michael O'Connor	80
	23	James Jones	97
	24	Micah Dyer, Jr. (Lawyer)	68
	25	Caroline Friedrich	86
	27	Henry Minton	79
	28	Albert A. Lane	78
	29	Jabez B. Cole (Undertaker)	58
	30	William E. James	74
	30	Sarah B. Homans	83
	30	Daniel Robinson	78
	30	Susan Wesson	100
Dec.	1	Alexander B. Canning (Court Messenger)	51
	3	Mary R. Boyd	81
	4	Patrick Kelley	80
	5	Sarah M. Crehoe	87
	6	Mary Gardner	81
	6	Jane Jones	89
	6	Francis A. Smith (Rev.)	53
	6	Susan Hutchinson	85
	7	Michael O. Boyle	85
	7	Mary Dowd	83
	8	Hannora Carroll	84
	8	James Hayes	87
	8	Leonard Day	80
	9	Ann Ferguson	80

DATE OF DEATH.
1897.

AGE.

Dec.	9	Elizabeth Fisher	88
	10	Joseph Barnes	84
	11	Mary H. Field	87
	11	Johanna Ellard	87
	11	Harriet S. Allen	83
	12	Hannah Hulihan	88
	12	Frederick Goetz	82
	12	George G. Farley	82
	12	Mary Farracy	84
	12	John Jeffries	73
	12	Isaac Ayling	81
	13	Olivia J. Lewis	80
	13	Benjamin C. Bowker	79
	15	Edward Kelley	79
	15	James M. Severance	83
	16	Maria Ventullo	83
	17	Elizabeth Munroe	74
	18	Owen A. Galvin (Lawyer)	44
	18	Elizabeth Hefentrager	90
	18	Roxana B. Currier	89
	21	Martha Briggs	84
	21	Elizabeth W. Blanchard	83
	21	Eliza Harrington	79
	25	Harry W. Howell (M.D.)	28
	25	Katharine Jenkins	86
	26	Hannah M. Wetsell	84
	27	Ann Keegan	89
	27	Dennis Shields	80
	27	Charles H. Betteley (Superintendent)	45
	28	Vogel Boas	83
	28	John C. Lord	83
	28	Thomas H. Badger (Artist)	77
	30	Martha L. Jenkins	80
	31	Lucy Whittemore	79
	31	John Lawler	82

Residents of Boston who died elsewhere.

Jan.	2	Clement C. Moriarty (Medfield)	77
	20	Roderick Walsh (Somerville)	80
	28	Marshall P. Eayrs (M.D.), (Foxboro)	51
Feb.	20	William H. Cundy Assistant Assessor (Tampa, Fla.)	65
Mar.	5	Harriet Glidden (Taunton)	82
	18	Charlotte M. E. S. Le Cain (Hyde Park)	80
April	3	Colin M. Edwards (Worcester)	91
	11	George R. Fowler, Lawyer (Philadelphia)	52
	15	James J. Storrow, Lawyer (Washington)	—
	27	Henry R. Merrill (Hot Springs, Va.)	—
May	21	Ernest B. Chenoweth, Editor (Leicester)	31
July	31	Charles H. Thayer (Revere)	45
Aug.	6	William Murray (Montague)	80
	13	Nancy Rindge (Medfield)	80
	13	Nahum Chapin (Phillips Beach)	77
Sept.	22	Simpson C. Bixby (Westboro)	80
	28	George Jackson (Westboro)	76
Dec.	4	Walter M. Wilson, M.D. (Cambridge)	89

APPENDIX B.

INTRODUCTION.

For many reasons it seems desirable to collect in chronological arrangement, the laws relating to marriages and the registration thereof, from the date of the establishment of the Commonwealth.

The history of the marriage laws prior to that date has been admirably set forth by Chief Justice HORACE GRAY of our Supreme Court, in the case of *Commonwealth v. Munson*, decided in Oct., 1879, and reported in 127 Mass. Reports.

With the consent of the Reporter of Decisions, the opinion is given in full.

W. H. W.

OPINION OF THE SUPREME COURT IN THE CASE OF
COMMONWEALTH *v.* MUNSON.

GRAY, C. J. In Massachusetts, from very early times, the requisites of a valid marriage have been regulated by statutes of the Colony, Province, and Commonwealth; the canon law was never adopted; and it was never received here as common law, that parties could by their own contract, without the presence of an officiating clergyman or magistrate, take each other as husband and wife, and so marry themselves. *Milford v. Worcester*, 7 Mass. 48, 53. 2 Dane Ab. 291, 301. 2 Winthrop's Hist. New England, 43. This clearly appears on tracing the history of the legislation upon the subject; the whole of which, whether repealed or unrepealed, is by a familiar rule to be considered in ascertaining the intention of the Legislature. *Church v. Crocker*, 3 Mass. 17, 21. *Eaton v. Green*, 22 Pick. 526, 531. *Commonwealth v. Bailey*, 13 Allen, 541, 545.

As early as 1639, it was "ordered and declared" by the General Court, "that there be records kept of the days of every marriage, birth and death of every person within this jurisdiction." 1 Mass. Col. Rec. 276. Anc. Chart. 43. In 1642, it was enacted that "the magistrates and other persons appointed to marry shall yearly deliver to the recorder of that court which is nearest to the place of their habitation the names of such persons as they have married, with the days, months and years of the same; and the said recorders are faithfully and carefully to enrol such marriages as shall thus be committed to their trust;" and in 1644,

every new-married man was required "to bring in a certificate of his marriage, under the hand of that magistrate which married him, to the clerk of the writs," to be recorded. 2 Mass. Col. Rec. 15, 59. Mass. Col. Laws (ed. 1660) 68; (ed. 1672) 130. Anc. Chart. 181.

The requisite of solemnization before a magistrate or other authorized person, as essential to constitute a valid marriage, which had been clearly implied in these statutes, was distinctly expressed in the following statute of 1646: "As the ordinance of marriage is honorable amongst all, so should it be accordingly solemnized. It is therefore ordered by this Court and authority thereof, that no person whatsoever in this jurisdiction shall join any persons together in marriage, but the magistrate, or such other as the General Court or Court of Assistants shall authorize in such place where no magistrate is near. Nor shall any join themselves in marriage, but before some magistrate or person authorized as aforesaid. Nor shall any magistrate, or other person authorized as aforesaid, join any persons together in marriage, or suffer them to join together in marriage in their presence, before the parties to be married have been published according to law." Mass. Col. Laws (ed. 1660) 52; (ed. 1672) 102. Anc. Chart. 152.

In 1656 and 1658, the "commissioners for ending small causes in the several towns where no magistrate dwells" were "authorized and empowered to solemnize marriage between parties legally published;" "and all other commissions in this case are hereby made void." 4 Mass. Col. Rec. pt. i. 255, 322. Anc. Chart. 152. The provision of the St. of 1646, prohibiting persons to join themselves in marriage, except before a magistrate or other authorized person, continued in force throughout the period of the colony charter.

By the Prov. St. of 1692-3 (4 W. & M.) c. 25, "every justice of the peace within the county where he resides, and every settled minister in any town, shall and are hereby respectively empowered and authorized to solemnize marriages, within their respective towns and counties, betwixt persons that may lawfully enter into such a relation, having the consent of those whose immediate care and government they are under, and being likewise first published" as therein directed; and "every justice and minister shall keep a particular register of all marriages solemnized before any of them, and make a return thereof" quarterly to the clerk of the sessions of the peace of the county, to be by him registered. 1 Prov. Laws (State ed.) 61. Anc. Chart. 242.

By the Prov. St. of 1695-6 (7 W. III) c. 2, § 4, "for the better preventing of clandestine marriages," it is enacted that "no person other than a justice of the peace, and that within his own county only, or ordained minister, and that only in the town where he is settled in the work of the ministry, shall or may presume to join any persons together in marriage; nor shall any justice or minister join any person in marriage other than such one or both of whom are inhabitants or residents in such county or town respectively;" with more specific provisions as to publication of banns and consent of parents and guardians, and a further provision that any justice, minister or other person offending

against this act shall suffer a penalty, and be "forever after disabled to join persons in marriage," and be also liable to an action by the parent or guardian. 1 Prov. Laws, 209, 210. Anc. Chart. 283.

By the Prov. St. of 1716-17 (3 Geo. I.) c. 16, after reciting in the preamble the principal passage above quoted from the act of 1695-6, it is enacted that "the power granted ministers to join persons together in marriage be hereby enlarged, so as that where there shall be no settled ordained minister in any town or precinct, or where the only settled ordained minister of any town or precinct is himself to be married, it shall and may be lawful in such cases for the next settled ordained minister in another town within the same county to join in marriage the minister, or inhabitants of such town or precinct destitute of such settled ordained minister, if such minister or inhabitants desire it, according to the rules prescribed by the laws of this Province for the consummating marriages;" and penalties are imposed on ministers and clerks neglecting to return or record marriages. 2 Prov. Laws, 60. Anc. Chart. 416.

So by an act of 1773 (13 Geo. III.) the authority of each minister of the Church of England within the Province to join persons in marriage, (which had previously been limited to persons belonging to the town in which the minister himself dwelt,) was not only extended to include persons usually worshipping with him and whose ministerial taxes he had a right by law to receive, although not belonging to the same town; but it was enacted that "where any minister of the Church of England is himself to be married, or where such minister shall be removed by death or otherwise, so that the religious society of Christians in which he presided shall be destitute of a minister, it shall be lawful in such cases for the next minister within the Province of the same denomination to join in marriage the minister, or any of the people constituting such religious society who may lawfully enter into such a relation." Mass. Perpetual Laws (Supplts. to ed. 1759) 632. Anc. Chart. 679.

These statutes plainly signify that by the law of the Province even a minister, authorized to solemnize marriages between other persons, could not marry himself.

The only other statutes of the Province which have come to our notice are one of 1727 (1 Geo. II.) providing for the publication of banns of persons residing in places where there was no town clerk, and one of 1763 (3 Geo. III.) concerning the powers of ministers whose parishes were made out of two or more adjacent towns. 2 Prov. Laws, 464. Mass. Perpetual Laws (Supplts. to ed. 1759) 444. Anc. Chart. 462, 655.

The Province laws on this subject remained in force until after our Revolution; and it was before they had been changed by any statute of the Commonwealth that the marriage took place, the validity of which was brought in question in the leading case of *Milford v. Worcester*, 7 Mass. 48. In that case it appeared that in 1784 a man and a woman went together into a room where a justice of the peace happened to be, and in his presence, and before other witnesses, after producing a cer-

tificate that their intentions of marriage had been published the man declared that he took the woman as his lawful wife, and she declared that she took him as her lawful husband, and each made to the other the vows and promises usual in contracting marriages ; but upon the question whether this proceeding was directed and encouraged by the justice the evidence was conflicting. It was ruled by Mr. Justice (afterwards Chief Justice) Sewall at the trial, and held by the full court in an elaborate judgment delivered by Chief Justice Parsons, that, if the proceeding had not the sanction of the justice as a magistrate, the marriage was void, and neither the woman nor her children took the settlement of the man. The position that the marriage, though not solemnized pursuant to the statutes, was yet a lawful marriage, had between parties competent to contract marriage, and not declared void by any statute, was fully argued and considered ; and the court, while admitting the strength of that position in States the laws of which had prescribed no regulations for the celebration of marriages, was clearly of opinion that the provisions of our statutes, by necessary implication, prohibited persons from solemnizing their own marriages by any form of mutual engagement, or in the presence of any witnesses whatever.

The St. of 1786, c. 3, manifested no intention to change the law in this respect. While it expressly repealed all former laws relating to the solemnization of marriages, it substantially reenacted many of their provisions. It empowered justices of the peace within their counties, and stated and ordained ministers within their towns or parishes, to solemnize marriages ; provided that, when any such minister was himself to be married, it should be lawful for any other such minister within the same county to marry him ; required "all persons desiring to be joined in marriage" to have their intention published, and to "produce to the justice or minister who shall be desired to marry them" a certificate of such publishment ; obliged justices and ministers to keep records and make returns of the marriages solemnized by them ; and made persons illegally solemnizing marriages, or neglecting to make returns, subject to penalties, and to be thereafter disqualified from joining persons in marriage.

It also contained a new provision declaring marriages which had been or should be had and solemnized among Quakers or Friends, in the manner and form used and practised in their societies, to be good and valid in law, and requiring the clerk or keeper of the records of the meeting at which such marriages should be had and solemnized to make returns thereof. St. 1786, c. 3, § 7. This section, Chief Justice Parsons tells us, was enacted in consequence of the general opinion of lawyers that such marriages were void before. *Milford v. Worcester*, 7 Mass. 56.

The St. of 1786 (after being amended in some unimportant particulars by the Sts. of 1795, c. 7, 1817, cc. 61, 141, and 1820, c. 55) was repealed by the St. of 1834, c. 177, which contained similar provisions, but allowed resident ministers to solemnize marriages throughout the Commonwealth, and therefore omitted as unnecessary the specific pro-

vision of former statutes as to the marriage of ministers, and also declared — thereby clearly implying that some solemnization beyond the mere contract of the parties was considered essential — that “all marriages, between persons who might lawfully enter into that relation; heretofore solemnized by any justice or minister, be and they hereby are confirmed and made valid in law, although such justice or minister may have exceeded his authority or jurisdiction.”

In the Rev. Sts. c. 75, the provisions of the previous statutes are substantially reenacted, and the following section [§ 24] is added: “No marriage, solemnized before any person professing to be a justice of the peace, or a minister of the gospel, shall be deemed or adjudged to be void, nor shall the validity thereof be in any way affected, on account of any want of jurisdiction or authority in such supposed justice or minister, or on account of any omission or informality in the manner of entering the intention of marriage, or in the publication of the banns; provided, that the marriage be in other respects lawful, and be consummated with a full belief, on the part of the persons so married, or of either of them, that they have been lawfully joined in marriage.” Rev. Sts. c. 75, § 24.

The object of this section, as declared in the Report of the Commissioners who framed it, was to adopt the principle stated in *Milford v. Worcester*, that a marriage would be lawful, if solemnized before a justice or minister, although without publication of the banns and without the consent of parents or guardians; and to extend that principle so as to prevent marriages from being invalidated on account of some defect, not known or suspected by either party, in the ordination of the minister or the commission of the justice in whose presence the marriage ceremony was performed. That the Commissioners understood the presence of some person, being or believed to be a magistrate or minister, to be necessary to the validity of every marriage of persons other than Quakers in this Commonwealth, clearly appears by their concluding sentence: “The essence of the contract is the assent of the parties; and if this assent is formally and solemnly given in the presence of one who is acting as a justice or minister, and who is honestly believed to be qualified as such, it furnishes all the security against fraud and surprise, which the law was designed to provide for.”

The existing laws upon the subject are mostly contained in the Gen. Sts. c. 106; and the only modification since the Rev. Sts. that is worthy of notice is that by which, where the fact of marriage is required to be proved before any court, evidence of the admission of that fact by the defendant, or of general repute, or of cohabitation as married persons, or any other circumstantial or presumptive evidence, is made competent. Sts. 1840, c. 84; 1841, c. 20. Gen. Sts. c. 106, § 22. Evidence of the kind here mentioned is simply made competent, not controlling when the whole truth appears.

Under all changes in the form of the statutes it has always been assumed in this Commonwealth, and in the State of Maine, which was originally a part thereof, that (except in the single case of Quakers, or

Friends, whose marriages are made valid by a special provision limited to that sect, and, though not solemnized by any magistrate or minister, are witnessed, recorded, and returned by the principal officer of the meeting at which the ceremony is performed) a marriage which is shown not to have been solemnized before any third person, acting or believed by either of the parties to be acting as a magistrate or minister, is not lawful or valid for any purpose. *Medway v. Needham*, 16 Mass. 157, 159. *Commonwealth v. Spooner*, 1 Pick. 235. *Meyers v. Pope*, 110 Mass. 314, 316. *Thompson v. Thompson*, 114 Mass. 566, 567. St. 1879, c. 116. *Brunswick v. Litchfield*, 2 Greenl. 28. *Ligonia v. Buxton*, 2 Greenl. 102. *State v. Hodgskins*, 19 Maine, 155. *State v. Bowe*, 61 Maine, 171, 177. See also *Dunbarton v. Franklin*, 19 N.H. 257, 266; *Northfield v. Plymouth*, 20 Vt. 582, 591; *Goshen v. Stonington*, 4 Conn. 209, 219; *Bashaw v. State*, 1 Yerger, 177; *Dennison v. Dennison*, 35 Md. 361.

It is proper, however, to notice more particularly the Massachusetts cases, on which the defendant's counsel relied.

The case decided by the Superior Court of Judicature of the Province in 1758, and cited in Quincy's Reports, 29, note, appears by the record there referred to, to have been as follows: Flora, a negro woman, was indicted on the Prov. St. of 1696 (8 W. III.,) c. 11, "to prevent the destroying and murdering of bastard children," which had this preamble: "Whereas many lewd women that have been delivered of bastard children, to avoid their shame and escape punishment, do secretly bury or conceal the death of their children, and after, if the child be found dead, the said women do allege that the said child was born dead, whereas it falleth out sometimes (though hardly it is to be proved) that the said child or children were murdered by the said women their lewd mothers, or by their assent or procurement," and which therefore enacted that any woman who should be delivered of a child "which, if it were born alive, should by law be a bastard," and endeavor to conceal the death thereof, whether it were born alive or not, should suffer death as in case of murder, unless she could prove that the child was born dead. 1 Prov. Laws, 255. Anc. Chart. 293. The indictment alleged, in the usual form of an indictment for murder, that the defendant threw her child alive into a vault and immersed it in the water and excrements therein, and thereby drowned and suffocated it. The jury, by special verdict, found "that the said Flora is and from her nativity has been a negro slave; that she was never married according to any of the forms prescribed by the laws of this land, but that the person supposed to be the father of the said child was also a slave, and had kept her company with her master's consent for above a year and a half before that she was delivered alone of the female child mentioned in the indictment, and thrust the same child into the vault and under the excrements and water, and that the same child was taken out dead therefrom, and that, by means of her so immersing the said child and concealing the death thereof, it cannot be known whether the said child was born dead or alive;" and the jury found the defendant

guilty or not guilty, according to the opinion of the court upon the question whether "the said female child, had it been born alive, would have been a bastard, within the meaning and design of" the statute on which the indictment was founded. "After mature advisement upon the said verdict, the court are of opinion that the said Flora is not guilty." Flora's case, Rec. 1758, fol. 295. We have no report of the grounds of that opinion; but it may well be that the court thought that so highly penal a statute, changing the ordinary rule as to burden of proof in criminal cases, should be strictly construed, and that the case was not within the evil which it was intended to prevent, as expressed in the preamble.

In *Parton v. Hervey*, 1 Gray, 119, it was decided, 1st, that the age of consent in this Commonwealth, as by the common law of England, was fourteen in males and twelve in females; and 2d, that the Prov. St. of 1695-6 (7 W. III.) c. 2, the Sts. of 1786, c. 3, and 1834, c. 177, and the Rev. Sts. c. 75, §§ 15, 19, prohibiting justices and ministers, under a penalty, from solemnizing marriages of males under twenty-one or of females under eighteen, without the consent of their parents or guardians, did not make void the marriage of a girl thirteen years old, solemnized by a justice or minister without such consent. The decision on the first point finds additional and conclusive support in the Prov. St. of 1694-5 (6 W. & M.), c. 5, § 5, which defined the age of consent to be in "the man fourteen years of age, the woman twelve." 1 Prov. Laws, 172. Anc. Chart. 278. 2 Dane Ab. 301. The decision on the second point was in exact accordance with the statement of Chief Justice Parsons in *Milford v. Worcester*, referred to in the Commissioners' Report on the Revised Statutes, as already mentioned, that "when a justice or minister shall solemnize a marriage between parties who may lawfully marry, although without publication of the banns of marriage, and without the consent of the parents or guardians, such marriage would unquestionably be lawful, although the officer would incur the penalty of fifty pounds for a breach of his duty." 7 Mass. 54, 55. The general statement of Mr. Justice Bigelow in the course of his discussion of this point — that, "in the absence of any provision declaring marriages, not celebrated in the prescribed manner, or between parties of certain ages, absolutely void, it is held that all marriages, regularly made according to the common law, are valid and binding, although had in violation of the specific regulations imposed by statute" — evidently had regard to the effect of specific regulations as to the publication of banns or the consent of parents, and not to the broader question, which was not before him, whether any presence of a third person was necessary. If the learned judge had intended to cast any doubt on the adjudication of that question in *Milford v. Worcester*, he would hardly have referred, as he did, to that case as supporting his statement. 1 Gray, 122.

In *Meyers v. Pope*, 110 Mass. 314, there was evidence that the parties went before a person whom they supposed to be a justice of the peace of the county, with the intent on the part of both to contract marriage

before him; that in his presence and hearing the man said that the woman was his wife; and that they afterwards cohabited together, believing themselves to have been then and thereby lawfully married. The extent of the decision, as stated by Chief Justice Chapman, was that the provision of the Rev. Sts. c. 75, § 24, and the Gen. Sts. c. 106, § 20, already quoted, (by which the law as declared in *Milford v. Worcester*, has been so far modified as to make a marriage before a justice or minister, believed by either of the parties to be authorized, as valid as if he were in fact authorized to solemnize the marriage,) should by a liberal construction be held to include a case "where the parties go before a magistrate or minister, make a marriage contract in some form in his presence, in the belief that he sanctions and assents to it in his official capacity, and cohabit as husband and wife afterwards, believing that they are legally married, though the magistrate understands the matter differently, and does not intend to act officially in the matter." 110 Mass. 316.

The presence of a person officiating, or at least believed to be officiating, as a justice or minister being (except in the case of Quakers) clearly required, according to a long course of legislative action and of judicial opinion, to constitute a valid marriage in this Commonwealth, it would be superfluous to examine the English decisions, or the cases cited at the argument showing that a different rule prevails in some other parts of the Union. Whether it is wise and expedient so to change the law of Massachusetts as to allow an act, which so deeply affects the relations and rights of the contracting parties and their offspring, to become binding in law by the mere private contract of the parties, without going before any one as a magistrate or minister, is a matter for legislative, and not for judicial consideration.

In the case before us, it appearing from the undisputed facts that, in the ceremony performed by the defendant and the woman with whom he has since cohabited, no third person participated or was understood or expected to participate in any way, and no civil magistrate or minister of the gospel, nor any person believed to be such, was present, and neither party was a Friend, or Quaker, it was rightly ruled in the Superior Court that no lawful or valid marriage between the parties had taken place.

But it does not follow that the conviction was warranted by the evidence before the jury. *Milford v. Worcester*, 7 Mass. 57. *Sedgwick, J.*, in *Mangue v. Mangue*, 1 Mass. 240, 242. To support an indictment against a man for adultery, it is sufficient to prove sexual connection between him and the wife of another man. *Commonwealth v. Elwells*, 2 Met. 190. To support an indictment for bigamy or polygamy, it is sufficient to prove that the defendant, being at the time lawfully married to one person, has married another. *Commonwealth v. Mash*, 7 Met. 472. *Reynolds v. United States*, 98 U.S. 145. But to support this indictment on the Gen. Sts. c. 165, § 6, it is necessary to prove not only that a man and a woman, "not being married to each other," "cohabited together," but that they so cohabited "lewdly and lascivi-

ously," — implying an evil intent, which cannot be inferred from the mere fact (such as was proved at the trial) of cohabitation under an honest, though mistaken, belief that the parties were lawfully married to each other. *Commonwealth v. Hunt*, 4 Cush. 49. If there were evidence that the cohabitation was under such circumstances as to create a common scandal, or tend to corrupt the public morals, the case might be different. See *Commonwealth v. Calef*, 10 Mass. 153; *Grisham v. State*, 2 Yerger, 589; *State v. Moore*, 1 Swan, 136.

Verdict set aside.

LEGISLATION UNDER THE COMMONWEALTH.

CHAPTER 69 OF ACTS OF 1785.

AN ACT FOR REGULATING MARRIAGE AND DIVORCE.

SECTION 1. *BE it enacted by the Senate and House of Representatives in General Court assembled, and by the authority of the same*, That no man or woman shall intermarry within the degrees hereafter named, that is to say:

No man shall marry his mother, grandmother, daughter, son's daughter, daughter's daughter, step-mother, grandfather's wife, son's wife, son's son's wife, daughter's son's wife, wife's mother, wife's grandmother, wife's daughter, wife's son's daughter, wife's daughter's daughter, sister, brother's daughter, sister's daughter, father's sister, mother's sister.

No woman shall marry her father, grandfather, son, son's son, daughter's son, step-father, grandmother's husband, daughter's husband, son's daughter's husband, daughter's daughter's husband, husband's father, husband's grandfather, husband's son, husband's son's son, husband's daughter's son, brother, brother's son, sister's son, father's brother, mother's brother.

And if any man or woman shall intermarry within the degrees aforesaid, every such marriage shall be deemed, taken and adjudged incestuous, and shall be null and void; and the issue of all such incestuous marriages shall be deemed, taken and adjudged illegitimate, and be subjected to all the legal disabilities of such issue.

SECT. 2. *And be it further enacted by the authority aforesaid*, That all marriages, where either of the parties shall have a former wife or husband living at the time of such marriage, shall be absolutely void, and no dower shall be assigned any widow in consequence of such marriage; and the issue thereof shall be deemed, taken and adjudged illegitimate, and be subject to all the legal disabilities of such issue.

CHAPTER 3 OF ACTS OF 1786.

AN ACT FOR THE ORDERLY SOLEMNIZATION OF MARRIAGES.

SECTION 1. *BE it enacted by the Senate and House of Representatives, in General Court assembled, and by the authority of the same,* That every Justice of the Peace, within the county where he resides, and every stated and ordained minister of the gospel in the town, district, parish or plantation, where he resides, shall be and hereby is authorized and empowered to solemnize marriages between persons that may lawfully enter into that relation, when one or both of the persons to be married, belong to, or are residents in the county where such justice resides, or one or both of them are inhabitants of, or residents in the town, district, parish, or plantation where such minister resides.

SECT. 2. *And be it further enacted by the authority aforesaid,* That when any settled and ordained minister of the gospel is himself to be married, it shall be lawful for any other such minister within the same county, to marry the said minister. And also, when any religious society shall be destitute of a settled and ordained minister of the gospel, in case there shall not be such a minister within the town, district or plantation in which such religious society is, it shall be lawful for any such minister, within the same county, to join any person of such town, district or plantation, in marriage: *Provided* such marriage be solemnized in the town, district or plantation where one of the parties to be married shall reside.

SECT. 3. *And be it further enacted by the authority aforesaid,* That all persons desiring to be joined in marriage shall have such their intentions published at three public religious meetings, on different days, at three days' distance exclusively at least from each other, in the town or district, wherein they respectively dwell, or shall have their intentions of marriage posted up by the clerk of such town or district, by the space of fourteen days, in some public place, within the same town or district, fairly written, and shall also produce to the justice or minister, who shall be desired to marry them, a certificate of such publishment, under the hand of the clerk of such town or district respectively; and also, that the intention of marriage hath been entered with him fourteen days, prior to the date of such certificate; and where a male, under twenty one years, or a female under eighteen years of age, is to be married, the consent of the parent, guardian or other person, whose immediate care and government such party is under, if within the Commonwealth, shall be first had to such marriage. And in case the parties or either of them live in a town, district or place where there shall be no clerk, then publishment shall be made in the town or district next adjoining, in manner aforesaid, and a certificate from the clerk of the same town or district, of such publishment, and of the entry of their intentions of marriage as aforesaid, shall be produced as aforesaid, previous to their marriage. *Provided,* That in regard to any plantation in the counties of Cumberland and Lincoln, where the parties, not under the respective ages aforesaid, shall have been inhabitants for the space of twelve months, and shall live twenty miles' distant from such next adjoining town or district, any justice or ordained minister belonging to this Commonwealth, may join them in marriage without such certificate.

SECT. 4. *And be it further enacted by the authority aforesaid,* That if, at any time, the banns of matrimony betwixt any persons shall be forbidden, and the reasons thereof assigned, in writing, by the person so forbidding the same, left with the town or district clerk, he shall forbear issuing a certificate as aforesaid, until the matter shall have been duly inquired into, and determined before two justices of the same county, *quorum unus*: *Provided*, the person forbidding the banns shall, within seven days after filing the reasons as aforesaid, apply unto two justices as aforesaid, and procure their determination thereon; unless the said justices shall certify unto the said clerk, that a further time is necessary for their determination on the reasons filed; in which case the clerk shall forbear issuing a certificate, until the time then certified to be necessary shall expire, unless the justices shall sooner determine; according to whose determination, the clerk shall govern himself herein; and if the said justices shall determine, that the reasons assigned by the person forbidding the said banns, were not supported by the laws of the Commonwealth, then the person so forbidding shall pay all the cost that may have arisen in consequence of such objection; and the said justices shall make up judgment and issue execution accordingly.

SECT. 5. *And be it further enacted by the authority aforesaid,* That if any person shall deface or pull down any publication posted up, in writing, as aforesaid, before the expiration of the said fourteen days, he shall forfeit and pay the sum of twenty shillings, to the use of the town; and if unable to pay the said fine, may be set in the stocks for the space of one hour. And if any Justice of the Peace or minister shall, otherwise than is expressly allowed and authorized by this Act, join any persons in marriage, they shall severally forfeit and pay the sum of fifty pounds, two third parts thereof to and for the use of the county wherein the offence may be committed, and the residue to the prosecutor, to be sued for and recovered in the Court of Common Pleas, within the same county, by the treasurer thereof, who is hereby enjoined, upon due information thereof, to prosecute and sue for the said penalty, without delay, or by the parent, guardian or other person under whose immediate care and government either of the parties were at the time of such marriage; and every justice or minister, against whom such recovery shall be had, is hereby forbidden from joining persons in marriage forever after. And in case a person forbid as aforesaid, or any other person whatever, not authorized and empowered to solemnize marriages by this Act, shall join any persons in marriage, and be convicted thereof in the Supreme Judicial Court, upon presentment or indictment, he shall stand one hour in the pillory, and be subjected to pay a fine, at the discretion of the court, to the use of the Commonwealth, not exceeding one hundred pounds, nor less than eighty pounds.

SECT. 6. *And be it further enacted,* That every justice and minister shall make and keep a particular record of all marriages solemnized before them respectively; and in the month of April, yearly, and every year, shall make a return to the clerk of the town, district or plantation in which he lives, certifying the names (both Christian names and surnames) of all the persons who have been by them respectively joined together in marriage within the year then last past, if any such have been by them so joined together.

[And if it shall so happen, that any one or more of the said justices or ministers shall not have joined together in marriage any persons during the course of the year then last past, it shall be the duty of such justice or minister also to certify to the said town-clerk, in writing, under his hand, that he has not joined any persons in marriage within the course of the said year:] *Repealed 1795, ch. 7.*

And if any justice or minister shall neglect to make such return, within the month of April, annually, the clerk of the town, district or plantation, where such delinquent justice or minister lives, shall, without

delay, certify such neglect to the clerk of the Court of General Sessions of the Peace of the same county, who shall lay the same before the said court at their next session; and the person so neglecting shall be cited to appear before the said court, to answer for such neglect; and if no sufficient reason shall be assigned therefor, he shall be considered and adjudged disqualified for joining persons in marriage for a term of time, not exceeding ten years, at the discretion of the justices of the said court. And every town and district clerk shall duly and seasonably record all marriages, so certified to him, as aforesaid:

[And shall also return a list or copy thereof to the clerk of the Court of General Sessions of the Peace of the same county, some time in the month of May, yearly and every year, to be there recorded, upon penalty of forfeiting twenty shillings for each neglect: And it shall be the duty of each clerk of the sessions to prosecute for every such neglect, in the county to which he belongs. And every clerk of the sessions shall record all such returns of marriages at large in a book to be kept for that purpose, and no other, under the same penalty for each neglect.] *Repealed 1795, ch. 41, § 1.*

SECT. 7. *And be it further enacted*, That no person by this Act authorized to marry, shall join in marriage any white person with any negro, indian or mulatto, on penalty of the sum of fifty pounds, two third parts thereof to the use of the county wherein such offence shall be committed, and the residue to the prosecutor, to be recovered by the treasurer of the same county, in manner as aforesaid; and all such marriages shall be absolutely null and void.

SECT. 8. *And be it further enacted by the authority aforesaid*, That any marriages which have been or hereafter may be had and solemnized, among the people called Quakers, or Friends, in the manner and form used and practised in their societies, shall be good and valid in law, anything in this Act to the contrary notwithstanding: And the clerk, or keeper of the records of the meeting wherein such marriage shall be had and solemnized, shall once a year make a certificate, under his hand, of all marriages had and solemnized in the society, or meeting, to which he belongs, and shall deliver the same to the clerk of the Court of General Sessions of the Peace of the county wherein the marriages have been had and solemnized, under the penalty of twenty shillings for each neglect. All fines, not particularly appropriated, shall be to the use of the prosecutor. And all former laws relating to the solemnization of marriages, are hereby repealed.

This Act to be in force from and after the last day of December, one thousand seven hundred and eighty-six, and not sooner. [June 22, 1786.]

CHAPTER 7 OF ACTS OF 1795.

AN ACT REPEALING A CERTAIN CLAUSE OF AN ACT, ENTITLED, "AN ACT FOR THE ORDERLY SOLEMNIZATION OF MARRIAGES."

WHEREAS in and by the Act, entitled, as aforesaid, among other things, the following clause is enacted, viz. "And if it shall so happen, that any one or more of the said justices or ministers shall not have joined together in marriage any person during the course of the year then last past, it shall be the duty of such justice or minister also to certify to the said town-clerk, in writing, under his hand, that he has not joined any persons in marriage within the course of the said year;" and a compliance with the said clause is found inconvenient:

Be it therefore enacted by the Senate and House of Representatives in General Court Assembled, and by the authority of the same, That the before recited clause be and it is hereby repealed. [June 15, 1795.]

CHAPTER 41 OF ACTS OF 1795.

FEES FOR MARRIAGES.

To the town-clerk for publishing the banns of matrimony, recording the same, giving a certificate of the publishment, and recording the marriage upon receiving the justice's or minister's certificate thereof, fifty cents, to be paid by the man published, on receiving a certificate of the publishment. And the town-clerk shall not in future be holden to return certificates of marriages to the clerks of the Courts of General Sessions of the Peace, nor clerks last mentioned to record the same. To every minister or Justice of the Peace, who shall lawfully solemnize a marriage, and certify the same, one dollar and twenty-five cents. To the town-clerk for recording births and deaths, eight cents each. For a certificate of a birth or death, ten cents. For a subpoena for one or more witnesses, ten cents.

CHAPTER 69 OF ACTS OF 1795.

AN ACT FOR RECORDING BIRTHS AND DEATHS BY THE CLERKS OF TOWNS AND DISTRICTS.

SECTION 1. *BE it enacted by the Senate and House of Representatives, in General Court assembled, and by the authority of the same,* That it shall be the duty of every town-clerk and every district-clerk, within this Commonwealth, to record all births and deaths which shall happen within his town or district and come to his knowledge, together with the time of such birth or death, and the names of his or her parents, if known, for the fees allowed, by law, to be paid by his town or district.

SECT. 2. *And be it further enacted,* That it shall be the duty of parents to give notice to the clerk of the town or district in which they dwell, of all the births and deaths of their children; and it shall be the duty of every householder to give notice of every birth and death which may happen in his house; and of the eldest person next of kin to give such notice of the death of his kindred; and it shall be the duty of the master or keeper of any alms-house, work-house or prison, and of the master or commander of any ship or vessel, to give notice of every birth and death which may happen in the house or vessel under his care or charge, to the clerk of the town or district in which such event shall happen: And in case any person, whose duty it shall be, by virtue of this Act, to give notice as aforesaid, shall neglect to perform the same for the space of six months after the birth or death shall happen, the person so neglecting shall pay a fine of one dollar, to be recovered, with costs of suit, on complaint before any Justice of the Peace for the same county, to the use of any inhabitant of the same town who shall prosecute for the same; from which judgment there shall be no appeal.

SECT. 3. *And be it further enacted,* That this Act shall be in force on and after the first day of September next; and that an Act passed *Anno Domini* one thousand six hundred and ninety-two, for registering births and deaths, shall be and hereby is repealed, on and after that day. [Feb. 26, 1796.]

CHAPTER 61 OF ACTS OF 1817.

AN ACT EXPLANATORY OF AN ACT, ENTITLED, "AN ACT FOR THE ORDERLY SOLEMNIZATION OF MARRIAGES."

BE it enacted by the Senate and House of Representatives, in General Court assembled, and by the authority of the same, That any marriage which has been, or which shall hereafter be solemnized by any minister or Justice of the Peace, agreeably to the provisions of the Act, entitled, "An Act for the orderly solemnization of Marriages," in any plantation, which at the time of passing said Act was included within the counties of Cumberland or Lincoln, shall be deemed and taken to be legal, to all intents and purposes, as if the said counties, or either of them, had not been divided. And every Justice of the Peace, or minister, who shall hereafter solemnize any such marriage, shall transmit a certificate thereof to the clerk of the Circuit Court of Common Pleas for the county in which said plantation is situated, to be recorded by said clerk, in a book to be by him kept for that purpose. [Jan. 27, 1818.]

CHAPTER 141 OF ACTS OF 1817.

AN ACT IN EXPLANATION OF AN ACT, ENTITLED, "AN ACT FOR THE ORDERLY SOLEMNIZATION OF MARRIAGES."

BE it enacted by the Senate and House of Representatives, in General Court assembled, and by the authority of the same, That all marriages (between persons who may or might lawfully enter into that relation) which have been or may hereafter be solemnized by any stated ordained minister of the gospel, in the town, parish, district, or plantation, within or over which such minister, at the time, was, or may be settled, and where one of the parties resided, or shall reside, shall be, and be considered valid in law, notwithstanding such minister, at the time, shall reside, or may have resided without the limits of the town, district, parish or plantation, within or over which he is, or was so settled. And it shall be sufficient that the certificate of any marriage, so solemnized, shall be lodged with the clerk of the town, district or plantation, within or over which such minister is so settled. [Feb. 20, 1818.]

CHAPTER 55 OF ACTS OF 1820.

AN ACT IN FURTHER ADDITION TO THE ACT FOR THE ORDERLY SOLEMNIZATION OF MARRIAGES.

SECTION 1. *BE it enacted by the Senate and House of Representatives, in General Court assembled, and by the authority of the same, That every stated ordained minister of the gospel shall be, and hereby is authorized and empowered to solemnize marriages between persons that may lawfully enter into that relation, when one or both of the persons to be married belong to the parish or congregation of such minister, although such person or persons shall reside without the limits of the town, parish, or district in which such minister may be settled; and such marriages may be solemnized either within the town, parish, or district wherein such minister resides, or wherein such person or persons may reside.*

SECT. 2. *Be it further enacted, That whenever any persons, who may lawfully enter into the marriage relation, shall belong to, or be resident in a town or district, in which there shall be no stated ordained minister of the gospel, of the sect or denomination to which such persons, or*

either of them belong, it shall be lawful for any settled, ordained minister, of the sect or denomination to which such persons, or either of them belong, residing in any other town or district within this Commonwealth, to solemnize marriage between such persons, within the town or district where they, or either of them reside; the certificate of which marriage shall be filed with the clerk of the town or district where such marriage shall be solemnized; and the duties of ministers and town clerks, in relation to certificates of marriage, solemnized under the provisions of this Act, and the penalties for the neglect thereof, shall be the same as are provided in the Act, entitled "An Act for the orderly solemnization of marriages." [Feb. 12, 1821.]

CHAPTER 177 OF ACTS OF 1834.

AN ACT FOR THE ORDERLY SOLEMNIZATION OF MARRIAGES.

SECTION 1. *BE it enacted by the Senate and House of Representatives, in General Court assembled, and by the authority of the same,* That every justice of the peace within his jurisdiction, and every minister of the Gospel within the Commonwealth, who has been ordained according to the usage of his denomination, and who is resident therein, be, and they hereby are authorized and empowered to solemnize marriages between persons who may lawfully enter into that relation, when either of the persons to be married belongs to, or is resident within the jurisdiction of said justice or minister; but all such marriages shall be solemnized in the city, town, or district in which the person solemnizing the same may reside, or within the city, town, or district in which one or both of the persons to be married may reside.

SECT. 2. *BE it further enacted,* That all persons desiring to be joined in marriage, shall have their intentions of marriage published at three public religious meetings, on different days, at three days' distance at least from each other exclusively, in the city, town, or district wherein they respectively dwell, or shall have such their intentions of marriage posted up, by the clerk of such city, town or district wherein they respectively dwell, for the space of fourteen days in some public place, within the same city, town, or district, fairly written, and shall also produce to the justice or minister, who may be desired to marry them, a certificate of such publication under the hand of the clerk of such city, town, or district respectively, and also that the intentions of marriage have been entered with him fourteen days prior to the date of such certificate; and when a male under twenty-one years, or a female under eighteen years of age, is to be married, the consent of the parent, guardian or other person under whose immediate care or government such party is, if within the Commonwealth, shall be first had to such marriage. And in case the parties or either of them, live in a town, district, or other place where there shall be no clerk, then publication shall be made in manner aforesaid, in a city, town, or district next adjoining, and the certificate from the clerk of such adjoining city, town, or district, of such publication, and of the entry of their intentions of marriage as aforesaid, previous to their marriage.

SECT. 3. *BE it further enacted,* That if, at any times, the bans of matrimony between any persons shall be forbidden, and the reasons thereof, assigned in writing by the person forbidding the same, be left with the city, town, or district clerk, he shall forbear issuing a certificate as aforesaid, until the matter shall have been duly inquired into and determined before two justices of the same county, quorum unus: *provided,* the person forbidding the bans, shall, within seven days after filing the reasons as aforesaid, apply unto two justices as aforesaid, and procure their determination thereon, unless the said justices shall certify unto the said clerk, that a further time is necessary for their determi-

nation on the reasons filed; in which case the clerk shall forbear issuing a certificate, until the time then certified to be necessary shall expire, unless the justices shall sooner determine, according to whose determination the clerk shall govern himself herein; and if the said justices shall determine that the reasons assigned by the person forbidding the said banns were not supported by the laws of the Commonwealth, then the person so forbidding shall pay all the cost that may have arisen in consequence of such objection, and the said justices shall make up judgment, and issue execution accordingly.

SECT. 4. *BE it further enacted*, That if any person shall deface or take down any publishment in writing, posted up as aforesaid, before the expiration of the fourteen days, he shall, upon conviction thereof, forfeit and pay a sum not less than two, or more than twenty dollars, to the use of the person who shall prosecute therefor. And if any justice of the peace, or minister, shall, otherwise than is expressly allowed and authorized by this act, join any persons in marriage, they shall, upon conviction thereof, severally forfeit and pay a sum not less than fifty, nor more than one hundred dollars, one moiety thereof to the use of the county wherein the offence may be committed, and the other moiety to the use of the person who shall prosecute therefor; and in case any person whatever, not authorized and empowered to solemnize marriages by this act, shall join any persons in marriage, and be convicted thereof in any court of competent jurisdiction, upon presentment or indictment, he shall be imprisoned in the common jail, or confined to hard labor, for a term not exceeding six months, or pay a fine of not less than fifty, nor more than two hundred dollars, to the use of the Commonwealth, at the discretion of said court.

SECT. 5. *BE it further enacted*, That every justice and minister shall make and keep a particular record of all the marriages solemnized before them respectively; and, in the month of April annually, shall make a return to the clerk of the city, town, or district in which he resides, of a certificate containing the Christian and surnames, and places of residence, of all the persons joined in marriage, by them respectively, within the year then last past, and also the time when, and the name of the city, town, or district, in which such marriages were respectively solemnized; and when neither of the persons married belongs to, or is resident in the city, town, or district, in which such justice or minister resides, then such justice or minister shall also make a like return of a certificate to the clerk of the city, town, or district in which one or both of the persons married may reside, within thirty days from the solemnization of the same. And any justice or minister who shall neglect to make such returns, shall, upon conviction thereof, before any court of competent jurisdiction, in the county in which he resides, forfeit and pay for each neglect a sum of not less than twenty nor more than one hundred dollars, at the discretion of said court, one moiety thereof to the use of said county, and the other moiety to the use of the person who shall prosecute for the same; and every city, town, or district clerk shall duly and reasonably record all marriages so certified to him as aforesaid.

SECT. 6. *BE it further enacted*, That all marriages which have been or may be solemnized among the people called quakers or friends, in the manner and form used and practised in their societies, shall be good and valid in law, anything in this act to the contrary notwithstanding. And the clerk or keeper of the records of the meeting wherein such marriages shall be solemnized, shall, in the month of April, annually, make and deliver to the clerk of the city, town, or district in which such society usually meet and worship, a certificate of all marriages solemnized therein, during the year then last past, as in the fifth section of this act is provided, under the penalty of not less than twenty nor more than one hundred dollars for each neglect, to be recovered in the manner and to the uses as in said fifth section is provided.

SECT. 7. *BE it further enacted*, That all marriages between persons who might lawfully enter into that relation, heretofore solemnized by any justice or minister, be and they hereby are confirmed and made valid in law, although such justice or minister may have exceeded his authority or jurisdiction.

SECT. 8. *BE it further enacted*, That "an act for the orderly solemnization of marriages" (except the seventh section thereof,) passed June twenty-second, in the year of our Lord one thousand seven hundred and eighty-six; also "an act repealing a certain clause of an act for the orderly solemnization of marriages," passed June fifteenth, in the year of our Lord one thousand seven hundred and ninety-five; also, "an act explanatory of an act for the orderly solemnization of marriages," passed January twenty-seventh, in the year of our Lord one thousand eight hundred and eighteen; also an act in explanation of an act for the orderly solemnization of marriages, passed February twentieth, in the year of our Lord one thousand eight hundred and eighteen, and also "an act in further addition to the act for the orderly solemnization of marriages," passed February twelfth, in the year of our Lord one thousand eight hundred and twenty-one, be, and they are hereby repealed: *provided, however*, that all marriages confirmed by, or solemnized in pursuance of the provisions of these acts, be ratified and confirmed.

SECT. 9. *BE it further enacted*, That no minister who has unintentionally violated the laws now in force, for the solemnization of marriages, shall be subjected to any penalty or punished for that cause.

SECT. 10. *BE it further enacted*, That the provisions of this act shall go into operation on the first day of May next. [Approved by the Governor, April 1, 1834.]

CHAPTER 15 OF THE REVISED STATUTES OF 1836.

RECORD OF BIRTHS AND DEATHS. — NOTICE OF BIRTHS AND DEATHS.

SECT. 46. The town clerk shall keep a record of the births and deaths of all persons within his town, and coming to his knowledge; and he shall specify in such record the day of each birth and death, and the names of the parents of such persons, if known.

SECT. 47. Parents shall give notice to the clerk of their town of all the births and deaths of their children; and every householder shall give the like notice of every birth and death happening in his house; and the eldest person next of kin shall give such notice of the death of his kindred; and the keeper of any almshouse, workhouse, house of correction, prison or hospital, and the master or other commanding officer of any ship, shall give the like notice of every birth and death happening among the persons under his charge; and every person neglecting to give such notice, for the space of six months, after the birth or death shall have happened, shall forfeit to the use of the town a sum not exceeding five dollars.

CHAPTER 75 OF THE REVISED STATUTES OF 1836.

FOR REGULATING MARRIAGES.

SECTION 1. No man shall marry his mother, grandmother, daughter, granddaughter, step-mother, grandfather's wife, son's wife, grandson's wife, wife's mother, wife's grandmother, wife's daughter, wife's granddaughter, sister, brother's daughter, sister's daughter, father's sister, or mother's sister.

SECT. 2. No woman shall marry her father, grandfather, son, grandson, step-father, grandmother's husband, daughter's husband, granddaughter's husband, husband's father, husband's grandfather, husband's son, husband's grandson, brother, brother's son, sister's son, father's brother, or mother's brother.

SECT. 3. In all the cases, mentioned in the two preceding sections, in which the relationship is founded on a marriage, the prohibition shall continue in full force, notwithstanding the dissolution of such marriage by death, or by a divorce, unless the divorce be for a cause, which shows the marriage to have been originally unlawful or void.

SECT. 4. All marriages, contracted whilst either of the parties has a former wife or husband living, shall be void, unless the former marriage shall have been dissolved for some cause other than the adultery of the person contracting such second marriage.

SECT. 5. No white person shall intermarry with a negro, indian or mulatto; and no insane person or idiot shall be capable of contracting marriage.

SECT. 6. When any persons, resident in this state, shall undertake to contract a marriage, contrary to the preceding provisions of this chapter, and shall, in order to evade those provisions, and with an intention of returning to reside in this state, go into another state or country, and there have their marriage solemnized, and shall afterwards return and reside here, such marriage shall be deemed void in this state.

SECT. 7. All persons, intending to be joined in marriage, shall cause notice of their intention to be entered, fourteen days at least before their marriage, in the office of the clerk of the town in which they may respectively dwell (if within this state); and if there be no such clerk in the place of their residence, the like entry shall be made with the clerk of an adjoining town.

SECT. 8. The intention shall be published by the clerk, with whom the entry is made, either by posting up a written notice thereof, in some public place in the town of which he is the clerk, fourteen days at least before the marriage, or by making a public proclamation thereof, at three public religious meetings in the town, on different days; the said meetings to be not less than three days distant from each other, exclusive of the days of the publication.

SECT. 9. The clerk shall deliver to the parties a certificate, under his hand, specifying the time when notice of the intention of marriage was entered with him, and the time of the publication thereof; which certificate shall be delivered to the magistrate or minister, in whose presence the marriage is to be contracted, before he shall proceed to solemnize the same.

SECT. 10. After the intention of marriage is entered with the clerk, if any person shall forbid the banns, and shall assign his reasons therefor in writing, and leave the same with the clerk, the certificate shall not be issued, until the matter shall have been duly inquired into and determined, in the manner hereinafter mentioned; provided the person forbidding the banns shall apply to two justices of the peace and of the quorum, of the same county, and shall, within seven days after the filing of his reasons, procure their decision thereon, or produce to the clerk their certificate that a further time is necessary for the consideration thereof; in which case, the clerk shall withhold his certificate, until the expiration of such further time, unless the justices shall sooner make known their decision.

SECT. 11. The two justices, so applied to, shall proceed forthwith to give notice thereof to the persons who propose to be married, and after a full hearing of the parties, or of the person objecting to the marriage, if the others do not appear, the justices shall decide on the truth and sufficiency of the reasons assigned for forbidding the banns,

and shall certify their decision thereon to the clerk, with whom the intention of marriage was entered.

SECT. 12. If the said two justices shall certify that the objections to the marriage are true and sufficient, the clerk shall not issue any certificate of the publication of the banns; but if they shall certify that the objections are not proved, or are not sufficient, or if they shall not agree in a determination thereupon, the clerk shall forthwith issue his certificate, in the same manner as if no objection had been made thereto.

SECT. 13. If the said justices shall certify that the objections to the marriage are true and sufficient, the persons, who propose to be married, or either of them, may appeal from such decision to the court of common pleas, or the supreme judicial court, next to be held for the same county, and the determination of the court thereon shall be final in the case; and the clerk of the town shall issue, or withhold, his certificate of the publication of the banns, according to such final determination.

SECT. 14. If the objections, so made to any marriage, shall not be proved, and adjudged to be sufficient, the person making the same shall pay all the costs, that shall have been incurred on account thereof, to be taxed by the justices or the court, as the case may be, and execution therefor shall be issued accordingly.

SECT. 15. When a male, under the age of twenty-one years, or a female, under the age of eighteen years, is to be married, the magistrate or minister shall not proceed to solemnize the marriage, without the consent of the parent or guardian, having the custody of such minor, if there be any in the state competent to act.

SECT. 16. Marriages may be solemnized by any justice of the peace, in the county for which he is appointed, when either of the parties resides in the same county; and they may be solemnized throughout the state by any minister of the gospel, who has been ordained according to the usage of his denomination, and who resides within the state, and continues to preach the gospel and to perform the other functions of his office; but all such marriages shall be solemnized in the town, in which the person solemnizing them may reside, or in which one or both of the persons to be married may reside.

SECT. 17. Every justice and minister shall keep a record of all marriages solemnized before him, and in the month of April, annually, shall make a return, to the clerk of the town in which he resides, of a certificate, containing the christian and surnames, and places of residence, of all the persons who have been by him joined in marriage, within the year then last past, and also the time when, and the name of the town in which, such marriages were respectively solemnized; and when neither of the married persons belongs to or is resident in the town in which the justice or minister resides, then such justice or minister shall, within thirty days after such marriage, also return a like certificate to the clerk of the town in which one or both of the married persons may reside; and all marriages, so certified to the clerk, shall be forthwith recorded by him in a book to be kept for that purpose.

SECT. 18. Every justice of the peace and minister, who shall neglect to make such returns, shall, upon conviction thereof, forfeit for each neglect a sum, not less than twenty, nor more than one hundred dollars; one moiety thereof to the use of the county in which he resides, and the other moiety to the use of the person who shall prosecute therefor.

SECT. 19. If any justice of the peace or minister shall join any persons in marriage, contrary to the provisions of this chapter, he knowing that the marriage is not duly authorized, he shall, upon conviction thereof, forfeit a sum not less than fifty, nor more than one

hundred dollars, one moiety thereof to the use of the county where the offence is committed, and the other moiety to the use of the person who shall prosecute therefor.

SECT. 20. If any person shall undertake to join others in marriage, knowing that he is not lawfully authorized so to do, and shall be thereof convicted, upon indictment in any court of competent jurisdiction, he shall be imprisoned in the common jail, or confined to hard labor, for a term not exceeding six months, or shall pay a fine, not less than fifty, and not more than two hundred dollars.

SECT. 21. If any person shall wilfully deface or take down any written notice of the intention of marriage, posted up as before prescribed, within fourteen days after it is so posted up, he shall, upon conviction thereof, forfeit a sum not less than two, or more than twenty dollars, to the use of the person who shall prosecute therefor.

SECT. 22. The preceding regulations, so far as they relate to the manner of solemnizing marriages, shall not effect [*affect*] marriages among the people called friends or quakers, but such marriages may be solemnized, in the manner heretofore used and practised in their societies.

SECT. 23. The clerk or keeper of the records of the meeting, wherein any marriages among the said friends or quakers shall be solemnized, shall, in the month of April, annually, make and deliver to the clerk of the town in which such society usually meet and worship, a certificate, like that before prescribed to be returned by justices and ministers, of all marriages solemnized in the said meeting, within the year then last past, under the penalty of not less than twenty, nor more than one hundred dollars, for each neglect; which penalty shall be recovered in the manner, and to the uses, provided in the case of a like neglect by a justice or minister.

SECT. 24. No marriage, solemnized before any person professing to be a justice of the peace, or a minister of the gospel, shall be deemed or adjudged to be void, nor shall the validity thereof be in any way affected, on account of any want of jurisdiction or authority in such supposed justice or minister, or on account of any omission or informality in the manner of entering the intention of marriage or in the publication of the banns; provided, that the marriage be in other respects lawful, and be consummated with a full belief, on the part of the persons so married, or of either of them, that they have been lawfully joined in marriage.

SECT. 25. The record of a marriage, made and kept as before prescribed, by a justice of the peace or minister, or by the clerk of any town, or a copy of any such record duly certified, shall be received, in all courts and places, as presumptive evidence of the fact of such marriage.

[NOTE. — By Chapter 146 it was provided that this revision was to take effect on and after the last day of April, 1836.]

CHAPTER 122 OF THE REVISED STATUTES OF 1836.

FEES FOR MARRIAGES.

SECT. 11. To the town clerk, for publishing the banns of matrimony, recording the same, giving a certificate thereof, and recording the marriage upon receiving the minister's or justice's certificate thereof, fifty cents, to be paid on delivering the certificate of publishing the banns:

To every minister or justice of the peace, who shall lawfully solemnize a marriage, and certify the same, one dollar and twenty-five cents.

TOWN CLERK'S FEES.

SECT. 12. For recording births and deaths, eight cents each:

For a certificate of a birth or death, ten cents:

For copies of town records, and other documents, furnished to any person at his request, if containing less than one page, ten cents, and if containing more, at the rate of twelve cents a page.

CHAPTER 84 OF ACTS OF 1840.

AN ACT RELATING TO THE EVIDENCE OF MARRIAGE.

Be it enacted by the Senate and House of Representatives, in General Court assembled, and by the authority of the same, as follows :

Whenever, on hearing of any application for divorce, the fact of marriage is required or offered to be proved, evidence of admission of said fact by the party against whom the process is instituted, or of general repute, or of cohabitation as married persons, or any other circumstantial or presumptive evidence, from which said fact may be inferred, shall be received as competent evidence for consideration, whether the marriage to be proved was contracted in this Commonwealth or elsewhere.

[Approved by the Governor, March 23, 1840.]

CHAPTER 20 OF ACTS OF 1841.

AN ACT IN ADDITION TO AN ACT RELATING TO THE EVIDENCE OF MARRIAGE.

Be it enacted by the Senate and House of Representatives, in General Court assembled, and by the authority of the same, as follows :

The provisions of an act relating to the evidence of marriage, passed on the twenty-third day of March, in the year one thousand eight hundred and forty, are hereby extended to all cases where it shall become necessary to prove the fact of marriage, in any hearing before any court in this Commonwealth.

[Approved by the Governor, Feb. 16, 1841.]

CHAPTER 95 OF ACTS OF 1842.

AN ACT RELATING TO THE REGISTRY AND RETURNS OF BIRTHS,
MARRIAGES, AND DEATHS.

Be it enacted by the Senate and House of Representatives, in General Court assembled, and by the authority of the same, as follows :

SECTION 1. The clerks of the several towns and cities in the Commonwealth shall, annually, in the month of May, transmit to the Secretary of the Commonwealth a certified copy of their record of the births, marriages, and deaths of all persons within their respective towns and cities, which may come to their knowledge; shall state the number of births and marriages, and the number of deaths, with the name, sex, age, (and if an adult male, the occupation,) and the names of the diseases of which all persons have died, or are supposed to have died, together with the cause or causes of the death of all such deceased persons, so far as they may be able to obtain a knowledge of the same from physicians or others; and any clerk who shall neglect to make such return, shall be liable to a penalty of ten dollars, to be recovered for the use of any town or city where such neglect shall be proved to have existed.

SECT. 2. The Secretary of the Commonwealth shall prepare and furnish to the clerks of the several towns and cities in this Commonwealth, blank forms of returns, as hereinbefore specified, and shall accompany the same with such instructions and explanations as may be necessary and useful; and he shall receive said returns, and prepare therefrom such tabular results as will render them of practical utility, and shall make report thereof annually to the legislature, and generally shall do whatever may be required to carry into effect the objects of this act, and of the several provisions of the Revised Statutes not inconsistent with this act.

[Approved by the Governor, March 3, 1842.]

CHAPTER 5 OF ACTS OF 1843.

AN ACT RELATING TO MARRIAGES BETWEEN INDIVIDUALS OF CERTAIN
RACES.

Be it enacted by the Senate and House of Representatives, in General Court assembled, and by the authority of the same, as follows :

So much of the fifth section of the seventy-fifth chapter and of the first section of the seventy-sixth chapter of the Revised Statutes, as relates to marriages between white persons and negroes, indians and mulattoes, is hereby repealed.

[Approved by the Governor, Feb. 25, 1843.]

CHAPTER 159 OF ACTS OF 1844.

AN ACT RELATING TO THE REGISTRY AND RETURNS OF BIRTHS,
MARRIAGES, AND DEATHS.

Be it enacted by the Senate and House of Representatives, in General Court assembled, and by the authority of the same, as follows :

SECTION 1. The clerks of the several cities and towns in this Commonwealth shall, annually, in the month of June, transmit to the secretary of the Commonwealth a certified copy of their record of births, marriages, and deaths, which have occurred within their respective cities and towns during the year next preceding the first day of said month.

The births shall be numbered and recorded in the order in which they are received by the clerk. The record of births shall state in separate columns the date of the birth, the place of birth, the name of the child, (if it have any,) the sex of the child, name and surname of one or both of the parents, occupation of the father, residence of the parents, and the time when the record was made.

The marriages shall be numbered and recorded in the order in which they are received by the clerk. The record of marriages shall state in separate columns, the date of the marriage, the place of the marriage, the name, residence, and official station of the person by whom married, the names and surnames of the parties, the residence of each, the age of each, the condition of each, (whether single or widowed,) the occupation, names of the parents, and the time when the record was made.

The deaths shall be numbered and recorded in the order in which they are received by the clerk. The record of deaths shall state in separate columns the date of the death, the name and surname of the deceased, the sex, condition, (whether single or married,) age, occupation, place of death, place of birth, names of the parents, disease or causes of death, and the time when the record was made.

SECT. 2. The school committee of each city or town shall, annually, in the month of May, ascertain from actual inquiry or otherwise, all the births which have happened within such city or town, during the year next preceding the first day of said May, together with the facts concerning births required by the first section of this act, and shall make an accurate return thereof to the clerk of such city or town, on or before the last day of said May; and the said school committee, or other person authorized by them to make such returns, shall be entitled to receive from the treasury of such city or town, five cents for each and every birth so returned.

SECT. 3. Every justice, minister, and clerk, or keeper of the records of the meeting wherein any marriages among the Friends or Quakers shall be solemnized, shall make a record of each marriage solemnized before him, together with all the facts relating to marriages required by the first section of this act; and each such justice, minister, clerk, or keeper shall, between the first and tenth days of each month, return a copy of the record for the month next preceding, to the clerk of the city or town in which the marriage was solemnized; and every person as aforesaid, who shall neglect to make the returns required by this section, shall be liable to the penalty provided in the eighteenth section of the seventy-fifth chapter of the Revised Statutes.

SECT. 4. Each sexton or other person, having the charge of any burial ground in this Commonwealth, shall, on or before the tenth day of each month, make returns of all the facts required by the first section of this act, connected with the death of any person whose burial he may have superintended during the month next preceding, to the clerk of

the city or town in which such deceased person resided at the time of his death. And such sexton, or other person, shall be entitled to receive from the treasury of the city or town to which the return is made, five cents for the return of each death made agreeably to the provisions of this act.

SECT. 5. The clerk of each city or town shall be entitled to receive from the treasury of such city or town, eight cents for the record of each birth and death: *provided* such clerk shall comply with this act in all respects.

SECT. 6. It shall be the duty of the clerks of the several cities and towns, to make such distribution of blank forms of returns as shall be designated by the secretary of the Commonwealth.

SECT. 7. The secretary of the Commonwealth shall prepare and furnish to the clerks of the several cities and towns in this Commonwealth, blank books of suitable quality and size, to be used as books of record, according to the provisions of this act, and also blank forms of returns, as herein before specified, and shall accompany the same with such instructions and explanations as may be necessary and useful; and he shall receive said returns, and prepare therefrom such tabular results, as will render them of practical utility, and shall make report thereof annually to the legislature, and generally shall do whatever may be required to carry into effect the provisions of this act.

SECT. 8. Any clerk who shall neglect to comply with the requirements of this act, shall be liable to a penalty of ten dollars, to be recovered for the use of any city or town where such neglect shall be proved to have existed.

SECT. 9. An act entitled "an act relating to the registry of births, marriages, and deaths," passed on the third day of March, in the year one thousand eight hundred and forty-two, is hereby repealed.

SECT. 10. This act shall take effect from and after its passage.

[Approved by the Governor, March 16, 1844.]

CHAPTER 222 OF ACTS OF 1845.

AN ACT CONCERNING MARRIAGE.

Be it enacted by the Senate and House of Representatives, in General Court assembled, and by the authority of the same, as follows:

The validity of any marriage in consequence of the incapacity of either of the parties thereto, to contract the same by reason of insanity or idiocy, shall not be called in question upon the trial of any collateral issue, before any of the courts of this Commonwealth, — but only in a process duly instituted, for the purpose of determining the validity thereof, during the life-time of both the parties thereto.

[Approved by the Governor, March 25, 1845.]

CHAPTER 202 OF ACTS OF 1849.¹

AN ACT RELATING TO THE REGISTRATION OF BIRTHS, MARRIAGES, AND DEATHS.

Be it enacted by the Senate and House of Representatives, in General Court assembled, and by the authority of the same, as follows:

SECTION 1. Town and city clerks are hereby authorized and required to obtain, record, and index the information concerning births, mar-

¹ Chapter 197 of Acts of 1846 relates to "Marriage and Divorce" but does not refer to the recording of marriages, nor the issuing of marriage licenses. — W. H. W.

riages, and deaths, now required by law. Towns and cities, containing more than ten thousand inhabitants, may choose a person, other than the town or city clerk, to be town or city registrar, to perform this duty instead of the town or city clerk; and said registrar shall take an oath faithfully to perform the duties of the office.

SECT. 2. The fees of the clerk and registrar, for obtaining, recording, and indexing the information required by this act, shall be as follows: For each birth, twenty cents; for each intention of marriage, including the certificate to the parties, fifty cents; for each marriage solemnized, ten cents; for each death, five cents; and the undertaker shall be allowed ten cents for information concerning each death which he returns to the clerk or registrar; said fees for births, deaths, and marriages solemnized, shall be paid by the town; and for intentions of marriage, by the parties having such intentions; *provided, however*, that the aggregate compensation, allowed to any clerk or registrar, may be limited by any town or city containing over ten thousand inhabitants, but, in no case, so as to prevent the full execution of this act.

SECT. 3. Any undertaker, or other person, having the superintendence of the burial of any deceased person, who shall neglect or refuse to obtain and return the information required by this act, concerning each person deceased, whose burial shall come under his superintendence, shall be liable to a penalty not exceeding twenty dollars for each neglect, and, if an undertaker, to be deprived of his office. And every clerk or registrar, who wilfully neglects or refuses to perform the duties herein prescribed, shall be liable to a penalty of not less than twenty, nor more than one hundred dollars, for each neglect or refusal. All penalties and forfeitures, under this act, may be recovered by any person who shall sue for the same, one-half thereof to the use of said complainant, and the other half to the use of the town or city in which the forfeiture shall have been incurred.

SECT. 4. The returns required to be made on the first day of February, in the year one thousand eight hundred and fifty, shall include the births, deaths, and marriages, from the first day of May, in the year one thousand eight hundred and forty-eight, to said day of return.

SECT. 5. Copies of records, in the several towns and cities, of the births, marriages, and deaths, which occurred during the next preceding year, ending December thirty-first, shall be returned to the Secretary of State, annually, on or before the first day of February. The blank forms of said returns shall be printed on paper of uniform size; and those for each year, when filled out and returned to the office of the Secretary of State, shall be bound together, in one or more volumes, and shall be furnished with an index. Blank books for indexes to the town registrars, *[sic]* shall be prepared by the Secretary of State, and furnished to the several towns and cities at the expense of the Commonwealth.

SECT. 6. All parts of acts inconsistent with the provisions of this act are hereby repealed.

[Approved by the Governor, May 2, 1849.]

CHAPTER 121 OF ACTS OF 1850.

AN ACT RELATING TO BANNS OF MARRIAGE.

Be it enacted by the Senate and House of Representatives, in General Court assembled, and by the authority of the same, as follows :

SECTION 1. All persons intending to be joined in marriage shall cause notice of their intention to be entered before their marriage, in the office of the clerk, registrar, or other officer appointed for such pur-

pose, of the city or town in which they may respectively dwell, (if within the State;) and if there be no such clerk in the place of their residence, the like entry shall be made with the clerk of an adjoining town.

SECT. 2. The clerk shall deliver to the parties a certificate under his hand, specifying the time when notice of the intention of marriage was entered with him, which certificate shall be delivered to the minister or magistrate, in whose presence the marriage is to be contracted, before he shall proceed to solemnize the same.

SECT. 3. Whenever parties living in this Commonwealth shall go out of it for the purpose of having a marriage solemnized between them in another state, and a marriage shall be so solemnized, and they shall return to dwell here, they are hereby required to file a certificate or declaration of their marriage, including the facts concerning marriages now required by law, with the clerk or registrar of the town or city where either of them lived at the time, within seven days after their return, under a penalty of ten dollars, to be recovered in the manner and to the uses specified in the third section of the "act relating to the registration of births, marriages, and deaths," passed on the second day of May, in the year eighteen hundred and forty-nine.

SECT. 4. The fee of the clerk or registrar, for making the record of such marriage, shall be fifty cents, to be paid by the said parties.

SECT. 5. So much of the seventy-fifth chapter of the Revised Statutes as is inconsistent with this act, is hereby repealed; *provided, nevertheless*, that nothing herein contained shall be so construed as to modify or alter the provisions of the twenty-second section of the said seventy-fifth chapter, which relates to marriages among the people called Friends or Quakers, but the same shall remain in full force.

[Approved by the Governor, March 28, 1850.]

CHAPTER 335 OF ACTS OF 1853.

AN ACT IN ADDITION TO AN ACT RELATING TO BANNES OF MARRIAGE.

Be it enacted by the Senate and House of Representatives, in General Court assembled, and by the authority of the same, as follows:

SECTION 1. No clerk or registrar of any city or town shall issue any certificate of intention of marriage to any male person under the age of twenty-one years, or to any female person under the age of eighteen years, except it be upon the application of the parent, master, or guardian of such person, or with their consent in writing expressed, under a penalty not exceeding one hundred dollars, to be recovered by indictment, to the use of the commonwealth, in any court proper to try the same: *provided*, that if there be no parent, master, or guardian, in the state, competent to act, a certificate may be issued without the application or written consent aforesaid.

SECT. 2. The clerk or registrar of every city or town may require of any person who shall apply for a certificate of intention of marriage, an affidavit, sworn to before some justice of the peace for the county where such application is made, setting forth his or her age, and for the purposes of this act, such affidavit shall be proof of the age of the person to whom such a certificate shall be given.

[Approved by the Governor, May 12, 1853.]

CHAPTER 366 OF ACTS OF 1855.

AN ACT RELATING TO THE REGISTRATION OF BIRTHS, MARRIAGES,
AND DEATHS, IN THE STATE ALMSHOUSES.

Be it enacted by the Senate and House of Representatives, in General Court assembled, and by the authority of the same, as follows :

The superintendents of the State almshouses located at Monson, Tewksbury, and Bridgewater, are hereby authorized and required to make record of all the births and deaths which occur in the institutions under their care, and make returns of the same to the secretary of State, annually, as all town and city clerks are required to do by the act to which this is an act in addition ; and the town clerks of Monson, Tewksbury, and Bridgewater are hereby exempted from all duties herein required of the superintendents of the above named institutions.

[Approved by the Governor, May 17, 1855.]

CHAPTER 34 OF ACTS OF 1857.

AN ACT IN ADDITION TO AN ACT RELATING TO BANNS OF MARRIAGE.

Be it enacted, etc., as follows :

If any person, applying to any clerk or registrar of any city or town for a certificate of intention of marriage, shall wilfully practise any deception, by making any false statement in relation to the age or residence of either of the parties intending marriage, or in relation to the parent, master, or guardian of either of the said parties, such person shall be subject to a penalty of not more than two hundred dollars, to be recovered by indictment, to the use of the Commonwealth, in any court competent to try the same.

[Approved March 28, 1857.]

CHAPTER 195 OF ACTS OF 1860.

AN ACT CONCERNING FRAUDULENT NOTICES OF BIRTHS, MARRIAGES,
AND DEATHS.

Be it enacted, etc., as follows :

Any person who shall wilfully send to the publishers of any newspaper, for the purpose of publication, a fraudulent notice of the birth of a child, or of the marriage of any parties, or of the death of any person, shall, upon conviction thereof, be punished by a fine not exceeding one hundred dollars.

[Approved April 4, 1860.]

GENERAL STATUTES,

To take effect June 1, 1860.

CHAPTER 21.

OF THE REGISTRY AND RETURNS OF BIRTHS, MARRIAGES, AND DEATHS.

SECTION 1. The clerk of each city and town shall receive or obtain, and record and index, the following facts concerning the births, marriages, and deaths, therein, separately numbering and recording the same in the order in which he receives them, designating in separate columns:

In the record of births, the date of the birth, the place of birth, the name of the child, (if it have any,) the sex and color of the child, the names and the places of birth of the parents, the occupation of the father, the residence of the parents, and the date of the record;

In the record of marriages, the date of the marriage, the place of marriage, the name, residence, and official station of the person by whom married, the names and the places of birth of the parties, the residence of each, the age and color of each, the condition of each, (whether single or widowed,) the occupation, the names of the parents, and the date of the record;

In the record of deaths, the date of the death, the name of the deceased, the sex, the color, the condition, (whether single, widowed, or married,) the age, the residence, the occupation, the place of death, the place of birth, the names and places of birth of the parents, the disease or cause of death, the place of burial, and the date of the record.

SECT. 2. Parents shall give notice to the clerk of their city or town of the births and deaths of their children; every householder shall give like notice of every birth and death happening in his house; the eldest person next of kin shall give such notice of the death of his kindred; the keeper of a workhouse, house of correction, prison, hospital, or almshouse, except the state almshouses at Tewksbury, Bridgewater, and Monson, and the master or other commanding officer of any ship shall give like notice of every birth and death happening among the persons under his charge. Whoever neglects to give such notice for the space of six months after a birth or death, shall forfeit a sum not exceeding five dollars.

SECT. 3. Any physician having attended a person during his last illness, shall, when requested within fifteen days after the decease of such person, forthwith furnish for registration a certificate of the duration of the last sickness, the disease of which the person died, and the date of his decease, as nearly as he can state the same. If any physician refuses or neglects to make such certificate, he shall forfeit and pay the sum of ten dollars to the use of the town in which he resides.

SECT. 4. Every sexton, undertaker, or other person having charge of a burial-ground, or the superintendent of burials having charge of the obsequies or funeral rites preliminary to the interment of a human body, shall forthwith obtain and return to the clerk of the city or town in which the deceased resided or the death occurred, the facts required by this chapter to be recorded by said officer concerning the deceased, and the person making such return shall receive from his city or town the fee of ten cents therefor.

The clerk, upon recording such facts, shall forthwith give to the person making such return, a certificate that such return has been made, which certificate such person shall deliver to the person having charge of the interment, if other than himself, before the burial when practicable, otherwise within seven days thereafter. When a burial takes place and no certificate is delivered as aforesaid, the sexton, undertaker, or other person having charge of the interment, shall forthwith give notice thereof to the clerk under penalty of twenty dollars.

SECT. 5. The clerk of each city and town shall annually on or before the first day of February, transmit to the secretary of the commonwealth, certified copies of the records of the births, marriages, and deaths, which have occurred therein during the year ending on the last day of the preceding December.

SECT. 6. The record of the town clerk relative to any birth, marriage, or death, shall be prima facie evidence, in legal proceedings, of the facts recorded. The certificate signed by the town clerk for the time being shall be admissible as evidence of any such record.

SECT. 7. The clerk shall receive from his city or town for obtaining, recording, indexing, and returning to the secretary of the commonwealth, the facts in relation to a birth, twenty cents; a marriage, ten cents; a death, twenty cents for each of the first twenty entries, and ten cents for each subsequent entry, as the same shall be certified by the secretary of the Commonwealth; but a city or town containing more than ten thousand inhabitants may limit the aggregate compensation allowed to their clerk. He shall forfeit a sum not less than twenty nor more than one hundred dollars for each refusal or neglect to perform any duty required of him by this chapter.

SECT. 8. The superintendents of the state almshouses at Tewksbury, Bridgewater, and Monson, shall obtain, record, and make return of, the facts in relation to the births and deaths which occur in their respective institutions, in like manner as is required of town clerks. The clerks of said towns shall, in relation to the births and deaths of persons in said almshouses, be exempt from the duties otherwise required of them by this chapter.

SECT. 9. The secretary shall at the expense of the Commonwealth prepare and furnish to the clerks of the several cities and towns, and to the superintendents of the state almshouses, blank books of suitable quality and size to be used as books of record under this chapter, blank books for indexes thereto, and blank forms for returns, on paper of uniform size; and shall accompany the same with such instructions and explanations as may be necessary and useful. City and town clerks shall make such distribution of blank forms of returns furnished by the secretary as he shall direct.

SECT. 10. The secretary shall cause the returns received by him for each year to be bound together in one or more volumes with indexes thereto. He shall prepare from the returns such tabular results as will render them of practical utility, make report thereof annually to the legislature, and do all other acts necessary to carry into effect the provisions of this chapter.

SECT. 11. Any city or town containing more than ten thousand inhabitants, may choose a person other than the clerk to be registrar, who shall be sworn, and to whom all the provisions of this chapter concerning clerks shall apply. The returns and notices required to be made and given to clerks shall be made and given to such registrar under like penalties.

SECT. 12. The secretary of this Commonwealth shall prosecute, by an action of tort, in the name of the Commonwealth, for the recovery of any penalty or forfeiture imposed by this [chapter] [*act*].

SECT. 13. Any city or town may make rules and regulations to enforce the provisions of this chapter, or to secure a more perfect registration of births, marriages, and deaths, therein.

GENERAL STATUTES OF 1860, CHAPTER 29.

KEEPING AND CUSTODY OF RECORDS.

SECT. 9. Registers of deeds, registers of courts, and the registers and clerks of courts, cities, and towns, shall keep all records and documents belonging to their offices in their sole custody, and shall in no case, except upon summons in due form of law, or when the temporary removal of records and documents in their custody is necessary or convenient for the transaction of the business of the courts or the performance of the duties of their respective offices, cause or permit any record or document to be removed or taken away.

SECT. 10. Under the direction of the officers having the custody of the county, city, and town records and files, the same shall be open for public inspection and examination, and any person may take copies thereof. And the several clerks and registers shall, on payment of a reasonable fee therefor, compare and certify, in the manner herein mentioned, all transcripts properly and correctly made for any county, city, or town, in pursuance of the provisions of this chapter.

GENERAL STATUTES OF 1860, CHAPTER 106.

OF MARRIAGE.

SECTION 1. No man shall marry his mother, grandmother, daughter, granddaughter, step-mother, sister, grandfather's wife, son's wife, grandson's wife, wife's mother, wife's grandmother, wife's daughter, wife's granddaughter, brother's daughter, sister's daughter, father's sister, or mother's sister.

SECT. 2. No woman shall marry her father, grandfather, son, grandson, step-father, brother, grandmother's husband, daughter's husband, granddaughter's husband, husband's father, husband's grandfather, husband's son, husband's grandson, brother's son, sister's son, father's brother, or mother's brother.

SECT. 3. In all cases mentioned in the two preceding sections in which the relationship is founded on marriage, the prohibition shall continue notwithstanding the dissolution of such marriage by death or divorce, unless the divorce is for a cause which shows the marriage to have been originally unlawful or void.

SECT. 4. All marriages contracted while either of the parties has a former wife or husband living, except as is provided in chapter one hundred and seven, shall be void.

SECT. 5. No insane person or idiot shall be capable of contracting marriage.

SECT. 6. When persons resident in this State, in order to evade the preceding provisions and with an intention of returning to reside in this state, go into another state or country and there have their marriage solemnized, and afterwards return and reside here, the marriage shall be deemed void in this state.

SECT. 7. Persons intending to be joined in marriage shall before their marriage cause notice thereof to be entered in the office of the clerk or registrar of the city or town in which they respectively dwell, if within the state. If there is no such clerk or registrar in the place of their residence, the entry shall be made in an adjoining city or town.

SECT. 8. The clerk or registrar shall deliver to the parties a certificate under his hand, specifying the time when notice of the intention of marriage was entered with him, together with all facts in relation to the

marriage required by law to be ascertained and recorded, except those respecting the person by whom the marriage is to be solemnized. Such certificate shall be delivered to the minister or magistrate in whose presence the marriage is to be contracted, before he proceeds to solemnize the same.

SECT. 9. If a clerk or registrar issues such certificate to a male under the age of twenty-one years, or a female under the age of eighteen years, having reasonable cause to suppose the person to be under such age, except upon the application or consent in writing of the parent, master, or guardian, of such person, he shall forfeit a sum not exceeding one hundred dollars; but if there is no parent, master, or guardian, in this state competent to act, a certificate may be issued without such application or consent.

SECT. 10. The clerk or registrar may require of any person applying for such certificate, an affidavit sworn to before a justice of the peace for the county where the application is made, setting forth the age of the parties; which affidavit shall be sufficient proof of age to authorize the issuing of the certificate.

SECT. 11. Whoever applying for such certificate wilfully makes a false statement in relation to the age or residence, parent, master, or guardian, of either of the parties intending marriage, shall forfeit a sum not exceeding two hundred dollars.

SECT. 12. When a marriage is solemnized in another state between parties living in this state, and they return to dwell here, they shall within seven days after their return file with the clerk or registrar of the city or town where either of them lived at the time, a certificate or declaration of their marriage, including the facts concerning marriages required by law, and for every neglect they shall forfeit ten dollars.

SECT. 13. No magistrate or minister shall solemnize a marriage, having reasonable cause to suppose either of the parties to be under the age mentioned in section nine, without the consent of the parent or guardian having the custody of the minor, if there is any in the state competent to act.

SECT. 14. Marriages may be solemnized by a justice of the peace in the county for which he is appointed, when either of the parties resides in the same county; and throughout the state by any minister of the gospel ordained according to the usage of his denomination, who resides within the state and continues to perform the functions of his office; but all marriages shall be solemnized in the city or town in which the person solemnizing them resides, or in which one or both of the persons to be married reside.

SECT. 15. Marriages among the people called Friends or Quakers may be solemnized in the manner heretofore used and practised in their societies.

SECT. 16. Every justice of the peace, minister, and clerk, or keeper of the records of the meeting wherein any marriages among the Friends or Quakers are solemnized, shall make a record of each marriage solemnized before him, together with all facts relating to the marriage required by law to be recorded. He shall also between the first and tenth days of each month return a copy of the record for the month next preceding, to the clerk or registrar of the city or town in which the marriage was solemnized, and shall, when neither of the parties to a marriage resides in the city or town in which the marriage is solemnized, return a copy of the record of such marriage to the clerk or registrar of the city or town in which one or both of said parties reside. All marriages so returned shall be recorded by the clerk or registrar.

SECT. 17. Every person neglecting to make the returns required by the preceding section shall forfeit for each neglect not less than twenty nor more than one hundred dollars.

SECT. 18. A justice of the peace or minister who joins persons in

marriage contrary to the provisions of this chapter, knowing that the marriage is not duly authorized, shall forfeit not less than fifty nor more than one hundred dollars.

SECT. 19. Whoever undertakes to join persons in marriage knowing that he is not authorized so to do, shall be imprisoned in the jail or confined to hard labor for a term not exceeding six months, or pay a fine of not less than fifty nor more than two hundred dollars.

SECT. 20. No marriage solemnized before a person professing to be a justice of the peace or minister of the gospel, shall be deemed or adjudged to be void, nor shall the validity thereof be in any way affected, by want of jurisdiction or authority in such person, or by an omission or informality in the manner of entering the intention of marriage, if the marriage is in other respects lawful, and is consummated with a full belief on the part of the persons so married, or either of them, that they have been lawfully joined in marriage.

SECT. 21. The record of a marriage, made and kept as prescribed by law by the person before whom the marriage is solemnized, or by the clerk or registrar of any city or town, or a copy of such record duly certified, shall be received in all courts and places as presumptive evidence of such marriage.

SECT. 22. When the fact of marriage is required or offered to be proved before any court, evidence of the admission of such fact by the party against whom the process is instituted, or of general repute, or of cohabitation as married persons, or any other circumstantial or presumptive evidence from which the fact may be inferred, shall be competent.

SECT. 23. Marriages solemnized in a foreign country by a consul or diplomatic agent of the United States shall be valid in this State; and a copy of the record of a certificate from such consul or agent shall be presumptive evidence of such marriage.

GENERAL STATUTES OF 1860, CHAPTER 157.

TOWN CLERKS.

SECT. 9. For entering notice of an intention of marriage and issuing the certificate thereof, and for entering the certificate of marriage filed by persons married out of the State, fifty cents, to be paid by the parties:

For a certificate of a birth or death, ten cents:

For copies of town records and other documents furnished to any person at his request, if containing less than one page, ten cents, and if more, at the rate of twelve cents a page.

MINISTERS, ETC., FOR MARRIAGES.

SECT. 10. For lawfully solemnizing and certifying a marriage by a minister or justice of the peace, one dollar and twenty-five cents.

SECT. 15. The word "page" when used as the measure of computation, shall mean two hundred and twenty-four words.

CHAPTER 96 OF ACTS OF 1865.

AN ACT RELATING TO THE REGISTRY AND RETURN OF BIRTHS.

Be it enacted, etc., as follows:

SECTION 1. It shall be the duty of every physician and midwife in the several cities and towns in this Commonwealth, on or before the tenth day of each month, to forward to the clerk of each city and town

a correct list of the births of all children born therein during the month next preceding, at which such physician or midwife was present; stating therein, as nearly as practicable, the place and date of each birth, the name, sex, and color of the child, the names, places of birth, and residence of the parents, and the occupation of the father.

SECT. 2. For every certificate of a birth, the physician or midwife shall receive twenty-five cents from such city or town; and any physician or midwife neglecting to forward such list for six months after it is due, shall forfeit a sum not exceeding five dollars, to be recovered as provided in the twelfth section of the twenty-first chapter of the General Statutes.

SECT. 3. This act shall take effect upon its passage.

Approved March 24, 1865.

CHAPTER 138 OF ACTS OF 1866.

AN ACT CONCERNING THE REGISTRY AND RETURN OF MARRIAGES, BIRTHS, AND DEATHS.

Be it enacted, etc., as follows:

SECTION 1. The clerk of each city and town except in such cities and towns as choose a registrar, under the eleventh section of the twenty-first chapter of the General Statutes, in which cases the provisions of this act shall apply to the registrar, for receiving or obtaining, recording, indexing and returning the facts relating to marriages, births and deaths occurring therein, shall be entitled to receive therefrom the sums following, viz.: for each marriage, fifteen cents; for each birth, thirty cents; for each death returned to him by the persons specified in sections two, three and four of chapter twenty-one of the General Statutes, twenty cents for each of the first twenty entries, and ten cents for each subsequent entry; for each death not so returned, but by him obtained and recorded, twenty cents.

SECT. 2. Chapter ninety-six of the acts of the year eighteen hundred and sixty-five, and so much of section seven of the twenty-first chapter of the General Statutes as is inconsistent herewith, are hereby repealed.

SECT. 3. This act shall take effect upon its passage.

Approved April 7, 1866.

CHAPTER 58 OF ACTS OF 1867.

AN ACT RELATING TO THE MARRIAGE OF NON-RESIDENT PARTIES.

Be it enacted, etc., as follows:

SECTION 1. Persons living without the Commonwealth and intending to be joined in marriage within the Commonwealth, shall, before their marriage, cause notice of their intention to be entered in the office of the clerk or registrar of the city or town in which they propose to have the marriage solemnized; and no marriage between such parties shall be solemnized until they shall have delivered to the justice of the peace, or minister, in whose presence the marriage is to be contracted, a certificate from such clerk or registrar, specifying the time when notice of the intention of marriage was entered with him, together with all the facts in relation to the marriage required by law to be ascertained and recorded, except those respecting the person by whom the marriage is to be solemnized.

SECT. 2. Marriages may be solemnized by a justice of the peace in the county for which he is appointed.

SECT. 3. A justice of the peace or minister who joins persons in marriage contrary to the provisions of this act shall forfeit not less than fifty nor more than one hundred dollars.

Approved March 11, 1867.

CHAPTER 248 OF ACTS OF 1867.

AN ACT IN RELATION TO MARRIAGE CONTRACTS.

Be it enacted, etc., as follows :

SECTION 1. No marriage contract heretofore made between parties, both of whom are now living, or which may be hereafter made, shall be invalid as between the parties thereto and their heirs and personal representatives by reason of the failure to record the same as required by section twenty-eight of chapter one hundred and eight of the General Statutes.

SECT. 2. This act shall take effect upon its passage.

Approved May 18, 1867.

CHAPTER 145 OF ACTS OF 1873.

AN ACT FIXING THE FEES OF CLERKS AND REGISTRARS FOR THE REGISTRY AND RETURN OF BIRTHS.

Be it enacted, etc., as follows :

SECTION 1. The clerk or registrar of a city or town shall receive the sum of fifty cents for receiving or obtaining, recording, indexing and returning the facts relating to each birth; but a city or town containing more than ten thousand inhabitants may limit the aggregate compensation allowed to their clerk or registrar.

SECT. 2. This act shall take effect upon its passage.

Approved April 2, 1873.

CHAPTER 202 OF ACTS OF 1873.

AN ACT RELATING TO THE FEES OF SEXTONS AND OTHERS.

Be it enacted, etc., as follows :

SECTION 1. Section four of chapter twenty-one of the General Statutes is amended by striking out the word "ten" after the words "fee of," and inserting instead thereof the word "twenty-five."

SECT. 2. This act shall take effect upon its passage.

Approved April 16, 1873.

CHAPTER 341 OF ACTS OF 1873.

AN ACT CONCERNING FEES OF TOWN CLERKS FOR OBTAINING AND RECORDING THE FACTS RELATING TO DEATHS.

Be it enacted, etc., as follows :

Chapter one hundred and thirty-eight of the acts of the year eighteen hundred and sixty-six is amended by striking out the words "twenty cents" at the close of section one, and substituting therefor the words "thirty-five cents."

Approved June 6, 1873.

CHAPTER 21 OF ACTS OF 1875.

AN ACT TO AMEND SECTION FIVE OF CHAPTER TWENTY-ONE OF THE GENERAL STATUTES, IN RELATION TO THE REGISTRY AND RETURNS OF BIRTHS, MARRIAGES AND DEATHS.

Be it enacted, etc., as follows :

SECTION 1. Section five of chapter twenty-one, of the General Statutes, is hereby amended by striking out the word "February" in the second line of said section and inserting in place thereof the word "March."

SECT. 2. This act shall take effect upon its passage.

Approved February 19, 1875.

CHAPTER 174 OF ACTS OF 1878.

AN ACT TO PROVIDE FOR THE MORE ACCURATE REGISTRATION OF VITAL STATISTICS.

Be it enacted, etc., as follows :

SECTION 1. No human body shall be buried, or removed from any city or town, until a proper certificate has been given by the clerk or local registrar of statistics to the undertaker or sexton, or person performing the burial, or removing the body. This certificate shall state that the facts required by chapter twenty-one of the General Statutes have been returned and recorded; and no clerk or local registrar shall give such certificate or burial permit until the certificate of the cause of death has been obtained from the physician, if any, in attendance at the last sickness of the deceased, and placed in the hands of said clerk or local registrar: *provided*, that in those cities and towns where local boards of health have been established, the certificate of the cause of death shall be approved by such board before a permit to bury is given by the registrar or clerk. Upon application, the chairman of the local board of health or any physician employed by any city or town for such purpose, shall sign the certificate of the cause of death to the best of his knowledge and belief, if there has been no physician in attendance. He shall also sign such certificate, upon application, in case of death by dangerous contagious disease, or in any other event when the certificate of the attending physician cannot for good and sufficient reasons be early enough obtained. In case of death by violence, the medical examiner attending shall furnish the requisite medical certificate. Any person violating the provisions of this section shall be punished by a fine not exceeding twenty-five dollars.

SECT. 2. This act shall take effect on the first day of May in the year eighteen hundred and seventy-eight; and all acts and parts of acts inconsistent herewith are hereby repealed.

Approved April 23, 1878.

CHAPTER 7 OF ACTS AND RESOLVES OF 1879.

RESOLVE RELATING TO THE TRANSFER OF CERTAIN RECORD OF MARRIAGES FOR THE COUNTY OF SUFFOLK FROM THE YEAR SEVENTEEN HUNDRED AND SIXTEEN TO THE YEAR SEVENTEEN HUNDRED AND THIRTY-ONE.

Resolved, That the clerk of the supreme judicial court for the county of Suffolk transfer to the city registrar of the city of Boston, the volume

containing the record of marriages in Suffolk county from the year seventeen hundred and sixteen to the year seventeen hundred and thirty-one inclusive.

Approved February 19, 1879.

CHAPTER 116 OF ACTS OF 1879.

AN ACT IN RELATION TO RETURNS OF MARRIAGES.

Be it enacted, etc., as follows :

SECTION 1. Every justice of the peace, minister, and clerk, or keeper of the records of the meeting wherein any marriages among the Friends or Quakers are solemnized, shall make a record of each marriage solemnized before him, together with all facts relating to the marriage required by law to be recorded. He shall also between the first and tenth days of each month return a copy of the record for the month next preceding, to the clerk or registrar of the city or town in which the marriage was solemnized, and shall, when one or both of the parties to a marriage resides in a city or town other than that in which the marriage is solemnized, return a copy of the record of such marriage to the clerk or registrar of the city or town in which either party resides, and to both cities or towns when the parties reside in different places. All marriages so returned shall be recorded by the clerk or registrar.

SECT. 2. Every person neglecting to make the returns required by the preceding section shall forfeit for each neglect not less than twenty nor more than one hundred dollars.

SECT. 3. Sections sixteen and seventeen of chapter one hundred and six of the General Statutes are hereby repealed.

Approved March 13, 1879.

CHAPTER 33 OF ACTS OF 1880.

AN ACT TO COMPEL A MORE ACCURATE REGISTRATION OF BIRTHS.

Be it enacted, etc., as follows :

SECTION 1. It shall be the duty of every physician and midwife in the several cities and towns in this Commonwealth, excepting Boston, to report on or before the fifth day of each month to the clerk of each city and town a correct list of births of all children born therein during the month next preceding at which such physician or midwife was present, stating therein the place, date of each birth, and parents' names.

SECT. 2. Town and city clerks shall give public notice that they are prepared to furnish the necessary blanks to all physicians and midwives applying therefor.

SECT. 3. Any physician or midwife neglecting to report such list for ten days after it is due shall for each offence forfeit a sum not exceeding twenty dollars.

SECT. 4. This act shall take effect upon its passage.

Approved February 26, 1880.

CHAPTER 11 OF ACTS OF 1881.

AN ACT CONCERNING MARRIAGES IN THE SOCIETY OF FRIENDS.

Be it enacted, etc., as follows:

SECTION 1. Section sixteen of chapter one hundred and six of the General Statutes is hereby amended by inserting after the word "him," in the fourth line, the words "or in the said meeting."

SECT. 2. Section twenty of said chapter is hereby amended by inserting after the word "gospel," in the second line, the words "or in the Society of Friends according to its usages," and by inserting after the word "person," in the fourth line, the words "or Society of Friends."

SECT. 3. This act shall take effect upon its passage.

Approved February 9, 1881.

CHAPTER 32 OF THE PUBLIC STATUTES.

[Enacted November 19, 1881, to take effect February 1, 1882.]

RECORDS OF BIRTHS, MARRIAGES AND DEATHS.

SECTION 1. The clerk of each city and town shall receive or obtain and record and index, the following facts concerning the births, marriages and deaths therein, separately numbering and recording the same in the order in which he receives them, designating in separate columns as follows:

In the record of births, the date of birth, the place of birth, the name of the child, (if it has any,) the sex and color of the child, the names and places of birth of the parents, the occupation of the father, the residence of the parents, and the date of the record.

In the record of marriages, the date of the marriage, the place of marriage, the name, residence and official station of the person by whom married, the names and the places of birth of the parties, the residence of each, the age and color of each, the condition of each, (whether single or widowed,) the occupation, the names of the parents, and the date of the record.

In the record of deaths, the date of the death, the name of the deceased, the sex, the color, the condition, (whether single, widowed, or married,) the age, the residence, the occupation, the place of death, the place of birth, the names and places of birth of the parents, the disease or cause of death, the place of burial, and the date of the record.

SECT. 2. Parents shall give notice to the clerk of their city or town of the births and deaths of their children; every householder shall give like notice of every birth and death happening in his house; the eldest person next of kin shall give such notice of the death of his kindred; the keeper of a workhouse, house of correction, prison, hospital, or almshouse, except the State almshouse, and the master or other commanding officer of a ship, shall give like notice of every birth and death happening among the persons under his charge. Whoever neglects to give such notice for the space of six months after a birth or death shall forfeit a sum not exceeding five dollars.

SECT. 3. A physician who has attended a person during his last illness shall, when requested within fifteen days after the decease of such person, forthwith furnish for registration a certificate of the duration of the last sickness, the disease of which the person died, and the date of his decease, as nearly as he can state the same. If a physician refuses

or neglects to make such certificate, he shall forfeit ten dollars to the use of the town in which he resides.

SECT. 4. Every sexton, undertaker, or other person having charge of a burial-ground, and every undertaker or superintendent of burials having charge of the funeral rites preliminary to the interment of a human body, shall forthwith obtain and return to the clerk of the city or town in which the deceased resided, or the death occurred, the facts required by this chapter to be recorded by said officer concerning the deceased, and the person making such return shall receive from his city or town the fee of twenty-five cents therefor.

SECT. 5. No human body shall be buried or removed from any city or town until a proper certificate has been given by the clerk or registrar to the undertaker, sexton or other person performing the burial or removing the body. Such certificate shall state that the facts required by this chapter have been returned and recorded; and no clerk or registrar shall give such certificate or burial permit until the certificate of the cause of death has been obtained from the physician, if any, in attendance at the last sickness of the deceased, and placed in the hands of said clerk or registrar; and in cities and towns where there are boards of health, the certificate of the cause of death shall also be approved by such board before a permit to bury is given by the registrar or clerk. Upon application, the chairman of the board of health, or any physician employed by any city or town for such purpose, shall sign the certificate of the cause of death to the best of his knowledge and belief, if there has been no physician in attendance. He shall also sign such certificate, upon application, in case of death by dangerous contagious disease, or in any other event when the certificate of the attending physician cannot for good and sufficient reasons be early enough obtained. In case of death by violence, the medical examiner attending shall furnish the requisite medical certificate. Any person violating the provisions of this section shall be punished by fine not exceeding twenty-five dollars.

SECT. 6. The boards of health of towns and the mayor and aldermen of cities shall, on or before the first day of July in each year, license a suitable number of undertakers to take charge of the funeral rites preliminary to the interment of a human body.

SECT. 7. Physicians and midwives shall on or before the fifth day of each month report to the clerk of each city and town, except Boston, a correct list of all children born therein during the month next preceding at the birth of which they were present, stating the place and date of each birth, and the parents' names.

SECT. 8. The clerk of each city and town shall give public notice that he is prepared to furnish, to all physicians and midwives applying therefor, blanks for returns under the preceding section.

SECT. 9. Any physician or midwife neglecting to report such list for ten days after it is due shall for each offence forfeit a sum not exceeding twenty dollars.

SECT. 10. The clerk of each city and town shall annually, on or before the first day of March, transmit to the secretary of the commonwealth certified copies of the records of the births, marriages and deaths which have occurred therein during the year ending on the last day of the preceding December.

SECT. 11. The record of the town clerk relative to a birth, marriage or death, shall be prima facie evidence, in legal proceedings, of the facts recorded. A certificate, signed by the town clerk for the time being, shall be admissible as evidence of such record.

SECT. 12. The clerk of each city and town, (except in such cities and towns as choose a registrar, in which cases the provisions of this section shall apply to the registrar,) for receiving or obtaining, recording, indexing, and returning the facts relating to marriages,

births and deaths occurring therein, shall be entitled to receive from the city or town for each marriage, fifteen cents; for each birth, fifty cents; for each death returned to him by the persons specified in sections two, three, and four, twenty cents for each of the first twenty entries, and ten cents for each subsequent entry; for each death not so returned, but by him obtained and recorded, thirty-five cents, as the same shall be certified by the secretary of the commonwealth; but a city or town containing more than ten thousand inhabitants may limit the aggregate compensation allowed to their clerk or registrar. He shall forfeit not less than twenty nor more than one hundred dollars for each refusal or neglect to perform any duty required of him by sections one, two, three, four, ten, twelve, fourteen, sixteen, and eighteen.

SECT. 13. The superintendent of the state almshouse shall obtain, record, and make return of the facts in relation to the births and deaths which occur in his institution, in like manner as is required of town clerks. The clerk of a town in which such almshouse is located shall, in relation to the births and deaths of persons in said almshouse, be exempt from the duties otherwise required of him by this chapter.

SECT. 14. The secretary shall at the expense of the commonwealth prepare and furnish to the clerks of the several cities and towns, and to the superintendent of the state almshouse, blank books of suitable quality and size to be used as books of record under this chapter, blank books for indexes thereto, and blank forms for returns, on paper of uniform size; and shall accompany the same with such instructions and explanations as may be necessary and useful. City and town clerks shall make such distribution of blank forms of returns furnished by the secretary as he shall direct.

SECT. 15. The secretary shall cause the returns received by him for each year to be bound together in one or more volumes with indexes thereto. He shall prepare from the returns such tabular results as will render them of practical utility, make report thereof annually to the general court, and do all other acts necessary to carry into effect the provisions of this chapter.

SECT. 16. A city or town containing more than ten thousand inhabitants may choose a person other than the clerk to be registrar, who shall be sworn, and to whom all the provisions of this chapter concerning clerks shall apply. The returns and notices required to be made and given to clerks shall be made and given to such registrar under like penalties.

SECT. 17. The secretary of the Commonwealth shall prosecute, by an action of tort in the name of the Commonwealth, for the recovery of any penalty or forfeiture imposed by sections two, three, twelve, sixteen, and eighteen.

SECT. 18. A city or town may make rules and regulations to enforce the provisions of this chapter, or to secure a more perfect registration of births, marriages, and deaths therein.

CHAPTER 37 OF THE PUBLIC STATUTES.

OF THE PUBLIC RECORDS.

SECT. 5. A city or town may cause to be carefully copied such of its records as relates to grants of land, — and also any records of births and marriages kept by such city or town or by a parish within the same.

SECT. 12. Registers of deeds and the registers and clerks of courts, cities and towns shall keep all records and documents belonging to their respective offices in their sole custody, and shall in no case, except upon summons in due form of law or when the temporary removal of

records and documents in their custody is necessary or convenient for the transaction of the business of the courts or the performance of the duties of their respective offices, cause or permit any record or document to be removed therefrom.

SECT. 13. Under the direction of the officers having the custody of any county, city or town records or files, all such records and files shall be open for public inspection and examination, and any person may take copies thereof. And the several clerks and registers shall, on payment of a reasonable fee therefor, compare and certify all copies properly and correctly made in pursuance of the provisions of this chapter.

CHAPTER 145 OF THE PUBLIC STATUTES.

OF MARRIAGE.

CERTAIN MARRIAGES PROHIBITED.

SECTION 1. No man shall marry his mother, grandmother, daughter, granddaughter, step-mother, sister, grandfather's wife, son's wife, grandson's wife, wife's mother, wife's grandmother, wife's daughter, wife's granddaughter, brother's daughter, sister's daughter, father's sister, or mother's sister.

SECT. 2. No woman shall marry her father, grandfather, son, grandson, step-father, brother, grandmother's husband, daughter's husband, granddaughter's husband, husband's father, husband's grandfather, husband's son, husband's grandson, brother's son, sister's son, father's brother, or mother's brother.

SECT. 3. In all cases in which the relationship mentioned in the two preceding sections is founded on marriage, the prohibition shall continue notwithstanding the dissolution by death or divorce of the marriage on which such relationship is founded, unless the divorce is for a cause which shows such marriage to have been originally unlawful or void.

SECT. 4. All marriages contracted while either of the parties has a former wife or husband living, except as is provided in chapter one hundred and forty-six, shall be void.

SECT. 5. No insane person or idiot shall be capable of contracting marriage.

SECT. 6. No magistrate or minister shall solemnize a marriage, when he has reasonable cause to suppose the male to be under the age of twenty-one years or the female to be under the age of eighteen years, except with the consent of the parent or guardian having the custody of the minor, if there is any such parent or guardian in the Commonwealth competent to act.

SECT. 7. Every marriage solemnized within this Commonwealth, which is prohibited on account of consanguinity or affinity between the parties, or on account of either of them having a former wife or husband living, or when either party was insane or an idiot, shall be void without a decree of divorce or other legal process.

SECT. 8. Every marriage solemnized when either party was under the age of consent shall be similarly void, if the parties separate during such nonage, and do not afterwards cohabit.

SECT. 9. The validity of a marriage shall not be questioned in the trial of a collateral issue on account of the insanity or idiocy of either party, but such question shall only be raised in a process instituted to test such validity in the lifetime of both parties.

SECT. 10. When persons resident in this Commonwealth, in order to evade any of the provisions of the first five sections of this chapter, and with an intention of returning to reside in this Commonwealth, go into another state or country and there have their marriage solemn-

nized, and afterwards return and reside here, the marriage shall be deemed void in this Commonwealth.

SECT. 11. When the validity of a marriage is doubted, either party may file a libel for annulling such marriage, or, when the validity of a marriage is denied or doubted by either party, the other party may file a libel for affirming the same. Such libel shall be filed in the same manner as a libel for divorce, and all the provisions of chapter one hundred and forty-six relative to libels for divorce, and section twenty-four of said chapter, relative to the powers of the court in relation thereto, shall, so far as applicable, apply to libels under this section. Upon proof of the nullity or validity of the marriage, it shall be declared void, or affirmed by a decree of the court, and such decree of nullity may be made notwithstanding the marriage was solemnized out of the Commonwealth, if the libellant had his domicile in the Commonwealth when the marriage was solemnized and also when the libel was filed, and such decree affirming a marriage shall be conclusive upon all persons concerned.

LEGITIMACY, CARE, ETC., OF ISSUE OF VOID MARRIAGES.

SECT. 12. The issue of a marriage declared void on account of consanguinity or affinity between the parties shall be deemed to be illegitimate.

SECT. 13. The issue of a marriage declared void on account of the nonage, insanity or idiocy of either party shall be deemed to be the legitimate issue of the parent who was capable of contracting the marriage.

SECT. 14. When a marriage is declared void on account of a prior marriage of either party, and it appears that the second marriage was contracted in good faith and with the full belief of the parties that the former husband or wife was dead, that fact shall be stated in the decree, and the issue of the second marriage, born or begotten before the commencement of the suit, shall be deemed to be the legitimate issue of the parent capable of contracting the marriage.

SECT. 15. Upon or after a decree of nullity the court shall have similar power to make orders concerning the care, custody and maintenance of the minor children of the parties as upon a decree of divorce.

NOTICE OF INTENTION OF MARRIAGE.

SECT. 16. Persons intending to be joined in marriage in this Commonwealth shall before their marriage cause notice of their intention to be entered in the office of the clerk or registrar of the city or town in which they respectively dwell, or, if they do not dwell within the Commonwealth, in the office of the clerk or registrar of the city or town in which they propose to have the marriage solemnized. If there is no such clerk or registrar in the place of their residence, the entry shall be made in an adjoining city or town.

SECT. 17. The clerk or registrar shall deliver to the parties a certificate under his hand, specifying the time when notice of the intention of marriage was entered with him, together with all facts in relation to the marriage which are required by law to be ascertained and recorded, except those respecting the person by whom the marriage is to be solemnized. Such certificate shall be delivered to the minister or magistrate before whom the marriage is to be contracted, before he proceeds to solemnize the same.

SECT. 18. If a clerk or registrar issues such certificate to a male under the age of twenty-one years, or to a female under the age of eighteen years, when he has reasonable cause to suppose the person to be under such age, except upon the application or consent in writing of the parent, master or guardian of such person, he shall forfeit a

sum not exceeding one hundred dollars; but if there is no parent, master or guardian in this Commonwealth competent to act, a certificate may be issued without such application or consent.

SECT. 19. The clerk or registrar may require of any person applying for such certificate an affidavit setting forth the age of the parties; which affidavit shall be sworn to before a justice of the peace, and shall be sufficient proof of age to authorize the issuing of the certificate.

SECT. 20. Whoever, when applying for such certificate, wilfully makes a false statement in relation to the age, residence, parent, master or guardian of either of the parties intending marriage, shall forfeit a sum not exceeding two hundred dollars.

SECT. 21. When a marriage is solemnized in another state between parties living in this Commonwealth, and they return to dwell here, they shall within seven days after their return file with the clerk or registrar of the city or town where either of them lived at the time a certificate or declaration of their marriage, including the facts concerning marriages required by law; and for every neglect so to do they shall forfeit ten dollars.

BY WHOM AND HOW MARRIAGE MAY BE SOLEMNIZED.

SECT. 22. A marriage may be solemnized by a justice of the peace or by a minister of the gospel, ordained according to the usage of his denomination, who resides in the Commonwealth and continues to perform the functions of his office; but every marriage shall be solemnized in the city or town in which the person solemnizing it resides, or in which one or both of the persons to be married reside.

SECT. 23. A marriage among the people called Friends or Quakers may be solemnized in the manner heretofore used and practised in their societies.

SECT. 24. Every justice of the peace, minister and clerk or keeper of the records of a meeting wherein marriages among Friends or Quakers are solemnized shall make a record of each marriage solemnized before him, or in such meeting, and of all facts relating to the marriage which are required by law to be recorded. He shall also, between the first and tenth days of each month, return a copy of all such records for the month next preceding to the clerk or registrar of the city or town in which the marriage was solemnized, and shall, when one or both of the parties to the marriage resided in a city or town other than that in which the marriage was solemnized, return a copy of the record of such marriage to the clerk or registrar of the city or town in which either party resided, and to the clerks or registrars of both cities or towns when the parties resided in different places. All marriages so returned shall be recorded by the clerk or registrar, and every person neglecting to make the returns required by this section shall forfeit for each neglect not less than twenty nor more than one hundred dollars.

SECT. 25. A justice of the peace or minister who joins persons in marriage contrary to the provisions of this chapter, knowing that the marriage is not duly authorized, shall forfeit not less than fifty nor more than one hundred dollars.

SECT. 26. Whoever undertakes to join persons in marriage, knowing that he is not authorized so to do, shall be imprisoned in the jail for a term not exceeding six months, or pay a fine of not less than fifty nor more than two hundred dollars.

SECT. 27. No marriage solemnized before a person professing to be a justice of the peace or a minister of the gospel, or solemnized in the society of Friends according to the usages of said society, shall be deemed or adjudged to be void, nor shall the validity thereof be in any way affected by want of jurisdiction or authority in such person or society, or by an omission or by informality in the manner of enter-

ing the intention of marriage, if the marriage is in other respects lawful, and is consummated with a full belief on the part of the persons so married, or of either of them, that they have been lawfully joined in marriage.

SECT. 28. Marriages solemnized in a foreign country by a consul or diplomatic agent of the United States shall be valid in this Commonwealth.

EVIDENCE OF MARRIAGE.

SECT. 29. The record of a marriage, made and kept as prescribed by law by the person before whom the marriage has been solemnized, or by the clerk or registrar of a city or town, or a copy of such record duly certified, shall be received in all courts and places as presumptive evidence of such marriage.

SECT. 30. When a marriage has been solemnized by a consul or diplomatic agent of the United States, a copy of the record or a certificate from such consul or agent shall be presumptive evidence of such marriage.

SECT. 31. When the fact of marriage is required or offered to be proved before a court, evidence of the admission of such fact by the party against whom the process is instituted, or evidence of general repute or of cohabitation as married persons, or any other circumstantial or presumptive evidence from which the fact may be inferred, shall be competent.

CHAPTER 199 OF THE PUBLIC STATUTES.

TOWN CLERKS.

SECT. 16. The fees of town clerks shall be as follows:

For entering notice of an intention of marriage and issuing the certificate thereof, and for entering the certificate of marriage filed by persons married out of the state, fifty cents, to be paid by the parties.

For a certificate of a birth or death, ten cents.

MINISTERS, ETC., FOR MARRIAGES.

SECT. 17. For lawfully solemnizing and certifying a marriage, a minister or justice of the peace shall be entitled to receive one dollar and twenty-five cents.

CHAPTER 207 OF THE PUBLIC STATUTES.

FRAUDULENT NOTICES.

SECT. 68. Whoever wilfully sends to the publisher of a newspaper, for the purpose of publication, a false notice of a birth, marriage or death, shall be punished by fine not exceeding one hundred dollars.

CHAPTER 124 OF ACTS OF 1883.

AN ACT RELATING TO THE REMOVAL AND TRANSPORTATION OF CERTAIN BODIES FOR BURIAL.

Be it enacted, etc., as follows:

SECTION 1. Section five of chapter thirty-two of the Public Statutes, relating to the burial or removal of bodies for burial, is amended by inserting in the eleventh line thereof, after the word "bury," the words "or remove."

SECT. 2. No railroad corporation, or other common carrier or person, shall convey or cause to be conveyed, through or from any city or town in this Commonwealth, the remains of any person who has died of small-pox, scarlet fever, diphtheria, or typhoid fever, until such body has been so encased and prepared as to preclude any danger of communicating the disease to others by its transportation; and no local registrar or clerk shall give a permit for the removal of such body until he has received from the board of health of the city, or the selectmen of the town where the death occurred, a certificate, stating the cause of death, and that said body has been prepared in the manner set forth in this section, which certificate shall be delivered to the agent or person who receives the body.

SECT. 3. This act shall take effect upon its passage.

Approved April 11, 1883.

CHAPTER 158 OF ACTS OF 1883.

AN ACT IN RELATION TO THE RETURNS OF BIRTHS BY PHYSICIANS AND MIDWIVES.

Be it enacted, etc., as follows :

SECTION 1. Section seven of chapter thirty-two of the Public Statutes is amended so as to read as follows: "Sect. 7. Physicians and midwives shall on or before the fifth day of each month report to the clerk of each city or town, except Boston, a correct list of all children born therein during the month next preceding, at whose birth they were present, stating the date and place of each birth, the name of the child (if it has any), the sex and color of the child, the name, place of birth and residence of the parents, and the occupation of the father. The fee of the physician or midwife shall be twenty-five cents for each birth so reported, and shall be paid by the city or town in which the report is made."

SECT. 2. This act shall take effect upon its passage.

Approved May 3, 1883.

CHAPTER 36 OF ACTS OF 1886.

AN ACT TO AMEND SECTION ELEVEN OF CHAPTER ONE HUNDRED AND FORTY-FIVE OF THE PUBLIC STATUTES RELATING TO MARRIAGE.

Be it enacted, etc., as follows :

SECTION 1. Section eleven of chapter one hundred and forty-five of the Public Statutes is hereby amended, by inserting in the fourteenth line of said section after the word "filed," the following words: — or has resided in this Commonwealth for five years next preceding the filing of said libel, unless it appears that said libellant has removed into this Commonwealth for the purpose of obtaining said decree.

SECT. 2. This act shall take effect upon its passage.

Approved March 2, 1886.

CHAPTER 202 OF ACTS OF 1887.

AN ACT IN RELATION TO THE RETURN AND RECORD OF BIRTHS MARRIAGES AND DEATHS.

Be it enacted, etc., as follows :

SECTION 1. Section five of chapter thirty-seven of the Public Statutes is hereby amended by inserting the word: — deaths, — after the

word "births" in the fourth line thereof, so that the same shall read: — also any records of births, deaths and marriages kept by such city or town or by a parish within the same.

SECT. 2. Section four of chapter thirty-two of the Public Statutes is hereby amended by adding at the end thereof the words: — all such returns shall be preserved by said clerk or registrar, and filed, arranged and indexed conveniently for examination and reference.

SECT. 3. Section twenty-four of chapter one hundred and forty-five is hereby amended by adding at the end thereof the words: — all such returns shall be preserved by said clerk or registrar, and filed, arranged and indexed conveniently for examination and reference.

SECT. 4. The provisions of sections two and three of this act shall apply to all returns of marriages and deaths now in the offices of town and city clerks and city registrars.

SECT. 5. Section one of chapter thirty-two of the Public Statutes is hereby amended by inserting after the word "burial" in the twentieth line of said section the words: — if the deceased was a married woman the name of her husband.

SECT. 6. This act shall take effect upon its passage.

Approved April 20, 1887.

CHAPTER 63 OF ACTS OF 1888.

AN ACT TO AMEND SECTION THREE OF CHAPTER THIRTY-TWO OF THE PUBLIC STATUTES RELATING TO THE FURNISHING, BY PHYSICIANS, OF CERTIFICATES OF DEATH.

Be it enacted, etc., as follows:

SECTION 1. Section three of chapter thirty-two of the Public Statutes is hereby amended by striking out after the words "when requested" in the second line thereof, the words "within fifteen days after the decease of such person."

SECT. 2. This act shall take effect upon its passage.

Approved February 27, 1888.

CHAPTER 306 OF ACTS OF 1888.

AN ACT RELATING TO THE CERTIFICATES AND REGISTRY OF DEATHS, AND THE BURIAL AND REMOVAL OF BODIES OF DECEASED PERSONS.

Be it enacted etc., as follows:

SECTION 1. Section three of chapter thirty-two of the Public Statutes, requiring attending physicians to furnish for registration certain facts relating to deceased persons, is amended so as to read as follows:

— Section 3. A physician who has attended a person during his last illness shall, when requested, forthwith furnish for registration, a certificate stating, to the best of his knowledge and belief, the name of the deceased, his age, the disease of which he died, the duration of his last sickness, and the date of his decease. If the physician neglect or refuse to make a certificate as aforesaid, he shall be punished by a fine not exceeding fifty dollars.

SECT. 2. Section five of said chapter, prohibiting the burial or removal of a human body until a proper certificate is furnished, is amended so as to read as follows:

Section 5. No undertaker, sexton or any other person shall bury in a city or town or remove therefrom the

body of a deceased person until he has received a permit so to do from the board of health or its duly appointed agent, or, if there is no board of health in such city or town, from the city or town clerk. No such permit shall be issued until there has been delivered to such board, or agent or clerk, as the case may be, a satisfactory written statement containing the facts required by this chapter to be returned and recorded, together with the certificate of the attending physician, if any, as required by section three of this chapter, or in lieu thereof a certificate as hereinafter provided. If there is no attending physician, or if the certificate of the attending physician cannot be obtained, for good and sufficient reasons, early enough for the purpose, the chairman of the board of health or any physician employed by a city or town for the purpose shall, upon request of said board, agent or clerk, make such certificate as is required of the attending physician; and in case of death by violence the medical examiner shall, if requested, make the same. When such satisfactory statement and certificate are delivered to the board of health or to its agent, the board or agent shall forthwith countersign and transmit the same to the clerk or registrar for registration. The person to whom the permit is so given shall thereafter furnish for registration any other information as to the deceased or to the manner and cause of the death, as the clerk or registrar may require. Any person violating any of the provisions of this section shall be punished by a fine not exceeding fifty dollars.

Approved May 4, 1888.

CHAPTER 208 OF ACTS OF 1889.

AN ACT IN RELATION TO THE RETURNS OF BIRTHS AND DEATHS.

Be it enacted, etc., as follows :

SECTION 1. The clerk or registrar of each city and town shall on the first day of each month make a certified copy of the record of all deaths and births recorded in the books of said city or town during the previous month, whenever the deceased person or the parents of the child born, were resident in any other city or town in this Commonwealth at the time of said death or birth; and shall transmit said certified copies to the clerk or registrar of the city or town in which such deceased person or parents were resident at the time of said death or birth, stating in addition the name of the street and number of the house, if any, where such deceased person or parents so resided, whenever the same can be ascertained; and the clerk or registrar so receiving such certified copies shall record the same in the books kept for recording deaths or births. Such certified copies shall be made upon blanks to be furnished for that purpose by the secretary of the Commonwealth.

SECT. 2. This act shall take effect upon its passage.

Approved April 5, 1889.

CHAPTER 288 OF ACTS OF 1889.

AN ACT IN RELATION TO THE RETURNS OF BIRTHS BY PHYSICIANS AND MIDWIVES.

Be it enacted, etc., as follows :

Section seven of chapter thirty-two of the Public Statutes, as amended by chapter one hundred and fifty-eight of the acts of the year eighteen hundred and eighty-three, is hereby further amended by striking out in

the second and third lines of said section the words "except Boston," so as to read as follows:

Section 7. Physicians and midwives shall, on or before the fifth day of each month, report to the clerk of each city or town a correct list of all children born therein during the month next preceding, at whose birth they were present, stating the date and place of each birth, the name of the child (if it has any), the sex and color of the child, the name, place of birth, and residence of the parents, and the occupation of the father. The fee of the physician or midwife shall be twenty-five cents for each birth so reported, and shall be paid by the city or town in which the report is made.

Approved April 26, 1889.

CHAPTER 402 OF ACTS OF 1890.

AN ACT IN RELATION TO THE RETURN AND RECORD OF DEATHS.

Be it enacted, etc., as follows:

SECTION 1. The last clause of section one of chapter thirty-two of the Public Statutes, as amended by section five of chapter two hundred and two of the acts of the year eighteen hundred and eighty-seven, is hereby further amended so that said clause shall read as follows: In the record of deaths, the date of the death, the name of the deceased, the sex, the color, the condition (whether single, widowed or married,) the age, the residence, the occupation, the place of death, the place of birth, the names and places of birth of parents, the disease or cause of death, the place of burial, if the deceased was a married woman her maiden name, and the name of her husband, and the maiden name of the mother of any deceased person, and the date of the record.

SECT. 2. This act shall take effect upon its passage.

Approved June 11, 1890.

CHAPTER 300 OF ACTS OF 1892.

AN ACT RELATING TO THE RECORD AND RETURN OF MARRIAGES.

Be it enacted, etc., as follows:

Section twenty-four of chapter one hundred and forty-five of the Public Statutes is hereby amended by inserting in the third line of said section, after the word "make," the words: — and keep, — by striking out, in the fifth line, the words "by law," by inserting after the word "recorded," in said fifth line, the words: — by section one of chapter thirty-two of the Public Statutes, — by striking out the word "each," in the sixth line of said section, and inserting in place thereof the word: — the, — by striking out all after the word "month," in said sixth line, to and including the word "solemnized," in the tenth line, and inserting in place thereof the following words:— following each marriage solemnized by him, return each certificate issued under the provisions of sections sixteen and seventeen of this chapter, to the clerk or registrar who issued the same; and if the marriage was solemnized in a city or town other than the place or places in which the parties to the marriage resided,—by striking out, in the eleventh line, the words "of the record of such marriage," and inserting in place thereof the following words: — of the certificate, or of either certificate in case two were issued,—by striking out all after the word "town," in the twelfth line, to and including "places," in the fourteenth line, and inserting in place thereof the following words: — in which the marriage was solemnized. Each certificate and copy so returned shall contain a statement giving the place and date of marriage, and shall be attested by the signature

of the person who solemnized the same, with his official station and residence added thereto, — by striking out the word “marriages,” in said fourteenth line, and inserting in place thereof the words:— certificates or copies,—by inserting after the word “registrar,” in the fifteenth line, the words:—receiving the same,—and by inserting after the word “the,” in said fifteenth line, the words:— record and,—so as to read as follows:

Section 24. Every justice of the peace, minister and clerk or keeper of the records of a meeting wherein marriages among Friends or Quakers are solemnized shall make and keep a record of each marriage solemnized before him, or in such meeting, and of all facts relating to the marriage which are required to be recorded by section one of chapter thirty-two of the Public Statutes. He shall also, between the first and tenth days of the month following each marriage solemnized by him, return each certificate issued under the provisions of sections sixteen and seventeen of this chapter, to the clerk or registrar who issued the same; and if the marriage was solemnized in a city or town other than the place or places in which the parties to the marriage resided, return a copy of the certificate, or of either certificate in case two were issued, to the clerk or registrar of the city or town in which the marriage was solemnized. Each certificate and copy so returned shall contain a statement giving the place and date of marriage, and shall be attested by the signature of the person who solemnized the same, with his official station and residence added thereto. All certificates or copies so returned shall be recorded by the clerk or registrar receiving the same, and every person neglecting to make the record and returns required by this section shall forfeit for each neglect not less than twenty nor more than one hundred dollars.

Approved May 17, 1892.

CHAPTER 305 OF ACTS OF 1892.

AN ACT CONCERNING RECORDS OF BIRTHS, DEATHS AND MARRIAGES.

Be it enacted, etc., as follows:

SECTION 1. Whenever the records of any city or town do not contain the facts relating to a birth, death or marriage which occurred therein, or whenever such facts are not fully or correctly stated on such records, the clerk or registrar of such city or town may receive a deposition, under oath, containing such facts as are desired for record, and shall then file said deposition and record said facts in a book to be kept for that purpose, stating in addition thereto the name and residence of the deponent and the date of such record. The clerk or registrar shall keep such book separate and apart from the official records of his office, and may certify to the facts contained therein; *provided, however*, that such certificate shall state in addition to all the facts so recorded that the certificate is issued in accordance with the provisions of this act.

SECT. 2. A clerk or registrar shall not alter or amend the record of any former clerk or registrar, nor any record made while he is in office, except to correct a clerical error made by himself or some person under his direction. Whenever it is deemed expedient to make a new copy of any earlier records, each page shall be verified and signed by the clerk or registrar, and such record while preserved in proper custody shall have the same force and effect as the original record.

SECT. 3. Any person who shall make a false return in regard to any birth or death shall be liable to a fine not exceeding fifty dollars.

Approved May 17, 1892

CHAPTER 314 OF ACTS OF 1892.

AN ACT CONCERNING THE CITY REGISTRAR OF THE CITY OF BOSTON.

Be it enacted, etc., as follows:

SECTION 1. The mayor of the city of Boston shall appoint, subject to confirmation by the board of aldermen of said city, a city registrar, who shall have charge of the registry department of said city and shall have all the powers and perform all the duties appertaining to registrars of cities provided for in section sixteen of chapter thirty-two of the Public Statutes; and said city may from time to time assign to said city registrar any other duties. Chapter two hundred and sixty-six of the acts of the year eighteen hundred and eighty-five and chapter four hundred and eighteen of the acts of the year eighteen hundred and ninety, and all other acts relating to departments of the city of Boston and officers in charge thereof, shall apply to said registry department and to said city registrar.

SECT. 2. The said city registrar shall, from his subordinates, appoint two assistant city registrars, who may, in the absence of the city registrar, perform his duties; and the certificates or attestations of either assistant city registrar shall have the same force and effect as that of the city registrar; said city registrar may pay, out of any funds received by him, the fees due to persons making returns under the requirements of law, and shall on or before the twentieth of each month transmit the accounts and vouchers for all funds so received and fees so paid to the city auditor.

SECT. 3. The duties imposed upon the clerks of cities or towns under sections fourteen and fifteen of chapter thirty-seven of the Public Statutes shall in Boston be performed by the city registrar.

SECT. 4. Said city may from time to time, by ordinance, direct the head of any department, including the city clerk, to place in charge of the city registrar any of the books or papers of such department bearing date prior to the year eighteen hundred and seventy-five, and may in like manner direct their return.

SECT. 5. In the city of Boston the penalties or forfeitures established by section seventeen of chapter thirty-two of the Public Statutes, or by acts supplementary thereto, shall be recovered on complaint, in the same manner as penalties for breaches of the ordinances of said city, and all fines paid on such complaints shall enure to said city for such uses as it may direct.

Approved May 19, 1892.

CHAPTER 263 OF ACTS OF 1893.

AN ACT RELATING TO CERTIFICATES AND REGISTRATION OF DEATHS AND TO THE BURIAL AND REMOVAL OF HUMAN BODIES.

Be it enacted, etc., as follows:

SECTION 1. Section three of chapter thirty-two of the Public Statutes, as amended by section one of chapter three hundred and six of the acts of the year eighteen hundred and eighty-eight, is hereby amended by inserting after the word "decease," in the seventh line the words: and a physician who has attended at a birth of a child dying immediately thereafter, or at the birth of a stillborn child, shall, when requested, forthwith furnish for registration a certificate stating, to the best of his knowledge and belief, the fact that such a child died after birth or was born dead, — also by inserting after the word "aforesaid," in the eighth line, the words: or makes a false statement therein, — so as to read as follows: *Section 3.* A physician who has attended a person during his last illness shall, when requested forthwith, furnish

for registration, a certificate stating, to the best of his knowledge and belief, the name of the deceased, his age, the disease of which he died, the duration of his last sickness, and the date of his decease; and a physician who has attended at a birth of a child dying immediately thereafter, or at the birth of a stillborn child, shall, when requested, forthwith furnish for registration a certificate stating, to the best of his knowledge and belief, the fact that such a child died after birth or was born dead. If a physician neglects or refuses to make a certificate as aforesaid, or makes a false statement therein, he shall be punished by a fine not exceeding fifty dollars.

SECT. 2. Section five of chapter thirty-two of the Public Statutes, as amended by section two of chapter three hundred and six of the acts of the year eighteen hundred and eighty-eight, is hereby amended by striking out in the second and third lines thereof, the words "the body of a deceased person," and inserting in place thereof the words: a human body,—so as to read as follows: *Section 5.* No undertaker, sexton, or other person shall bury in a city or town or remove therefrom a human body until he has received a permit so to do from the board of health or its duly appointed agent, or, if there is no board of health in such city or town, from the city or town clerk. No such permit shall be issued until there has been delivered to such board, or agent or clerk, as the case may be, a satisfactory written statement containing the facts required by this chapter to be returned and recorded, together with the certificate of the attending physician, if any, as required by section three of this chapter, or in lieu thereof a certificate as hereinafter provided. If there is no attending physician, or if the certificate of the attending physician cannot be obtained, for good and sufficient reasons, early enough for the purpose, the chairman of the board of health or any physician employed by a city or town for the purpose shall, upon request of said board, agent, or clerk, make such certificate as is required of the attending physician; and in case of death by violence the medical examiner shall, if requested, make the same. When such satisfactory statement and certificate are delivered to the board of health or to its agent, the board or agent shall forthwith countersign and transmit the same to the clerk or registrar for registration. The person to whom the permit is so given shall thereafter furnish for registration any other information as to the deceased or to the manner and cause of the death, as the clerk or registrar may require. Any person violating any of the provisions of this section shall be punished by a fine not exceeding fifty dollars.

SECT. 3. This act shall take effect upon its passage.

Approved April 26, 1893.

CHAPTER 461 OF ACTS OF 1893.

AN ACT RELATIVE TO SOLEMNIZING MARRIAGES.

Be it enacted, etc., as follows:

SECTION 1. Any rabbi of the Israelitish faith may solemnize a marriage under the same rules, restrictions, obligations and penalties as are imposed by law upon ministers of the gospel in this Commonwealth. Such rabbi must be one duly licensed to act by a congregation of said faith established in this Commonwealth.

SECT. 2. The provisions of section twenty-seven of chapter one hundred and forty-five of the Public Statutes shall apply to such a marriage.

SECT. 3. This act shall take effect upon its passage.

Approved June 9, 1893.

CHAPTER 206 OF ACTS OF 1894.

AN ACT RELATING TO RETURNS OF BIRTHS, MARRIAGES, AND DEATHS.

Be it enacted, etc., as follows :

Section ten of chapter thirty-two of the Public Statutes is hereby amended by inserting in the first line after the word "town" the words "except Boston," and by adding at the end of said section the words, "the city registrar of Boston shall transmit the copies of his record on or before the first day of May annually," so as to read as follows:

"Section 10. The clerk of each city and town, except Boston, shall annually, on or before the first day of March, transmit to the secretary of the Commonwealth certified copies of the records of the births, marriages, and deaths which have occurred therein during the year ending on the last day of the preceding December. The city registrar of Boston shall transmit the copies of his records on or before the first day of May annually."

Approved April 5, 1894.

CHAPTER 401 OF ACTS OF 1894.

AN ACT CONCERNING THE MARRIAGE OF MINORS.

Be it enacted, etc., as follows :

SECTION 1. No town or city clerk or registrar shall receive a notice of the intention of marriage of any male under the age of eighteen years, nor of any female under the age of sixteen years, except as hereinafter provided.

SECT. 2. The judge of probate in any county, after due hearing, may make an order allowing the marriage of a minor under the age specified in the preceding section: *provided*, that said minor resides in a city or town within the county wherein said judge holds court; and *provided, also*, that the father of such minor, or in case of his death the mother, has consented to such order, and that in case neither parent is alive and resident in this Commonwealth a legal guardian has been appointed, whose consent has been given to such order. On the receipt of a certified copy of such order by the clerk or registrar of the town or city where such minor resides, he shall receive the notice required by law and issue a certificate as in other cases.

SECT. 3. This act shall take effect upon its passage.

Approved May 18, 1894.

CHAPTER 402 OF ACTS OF 1894.

AN ACT RELATIVE TO RECORDS OF BIRTHS, DEATHS, AND MARRIAGES.

Be it enacted, etc., as follows :

SECTION 1. Section two of chapter three hundred and five of the acts of the year eighteen hundred and ninety-two is hereby amended by striking out all of said section to and including the word "direction," in the fifth line, so as to read as follows:

"Section 2. Whenever it is deemed expedient to make a new copy of any earlier records, each page shall be verified and signed by the clerk or registrar, and such record while preserved in proper custody shall have the same force and effect as the original record."

SECT. 2. No town or city clerk or registrar shall alter or add to any record of a birth, death, or marriage already entered in any book or formal list in his charge, except upon such evidence as was required by law for the original entry, or upon a certified copy of the record of any other city or town, or of the record made at the time by any person since deceased, who was required by law to furnish the evidence of birth, death, or marriage, and such correction shall be at his discretion. In no case shall the first entry be erased, but all corrections shall be added.

SECT. 3. This act shall take effect upon its passage.

Approved May 18, 1894.

CHAPTER 409 OF ACTS OF 1894.

AN ACT RELATIVE TO MARRIAGES AND THE ISSUING OF CERTIFICATES THEREFOR.

Be it enacted, etc., as follows:

SECTION 1. City clerks and registrars may require notices of intention of marriage to be given to them in writing, on blanks to be furnished by them, by one of the parties to such intended marriage, or by his or her parent or legal guardian, and may require the party giving such notice to make oath before them to the truth of all the statements therein whereof he or she could have knowledge. No fee shall be charged for administering such oath.

SECT. 2. Any city clerk or registrar may refuse to issue a certificate to any parties, in case he has reasonable grounds to believe that any of the statements contained in the notice of intention of marriage are incorrect; but he may, in his discretion, accept depositions under oath, made before him, and such depositions shall be taken and deemed to be sufficient proof of the facts therein stated to authorize the issuing of a certificate. A city clerk or registrar may dispense with the statement of any of the facts required by law to be given in notices of intention of marriage, whenever such facts do not relate to or affect the identity or age of the parties, if he is satisfied that the same cannot be obtained with reasonable effort.

SECT. 3. No city clerk or registrar shall be required to receive notices of intention of marriage at any place except his office, nor shall he be required to receive such notices on the Lord's day or public holidays.

SECT. 4. Whenever, in the marriage of a minor, it is necessary to give notice in two towns or cities, the town or city clerk or registrar who first takes the consent of the parent or guardian shall take it in duplicate, retaining one copy and delivering the other duly attested by him to the party obtaining the certificate, to be given to the clerk or registrar issuing the second certificate; and no fee shall be charged for such consent or copy.

SECT. 5. Any clergyman or rabbi duly authorized to solemnize a marriage in this Commonwealth may perform the ceremony anywhere within the same.

SECT. 6. No person shall give the notice of intention of marriage required by law without the consent of both the parties to such intended marriage, and any person giving such notice without such consent shall be liable in an action of tort to the person whose name was so used without such consent for all damages thereby sustained by such person.

SECT. 7. The superior court, upon petition of either of the parties alleged to intend marriage in a notice of intention of marriage, given

without the consent of both parties therein alleged to intend marriage, and not followed by a marriage between said parties, may, upon such notice as said court may order and after a hearing upon such petition, adjudge that such notice of intention of marriage be cancelled and expunged from the records of the city or town in which the same was recorded.

SECT. 8. Whoever violates any of the provisions of this act shall, upon conviction thereof within one year after such violation, be punished by a fine not exceeding five hundred dollars or by imprisonment in jail or in the house of correction for not more than one year, or both.

Approved May 19, 1894.

CHAPTER 427 OF THE ACTS OF 1895.

AN ACT RELATIVE TO MARRIAGE AND THE LEGITIMACY OF CHILDREN.

Be it enacted, etc., as follows:

Where a marriage contract has been entered into with due legal ceremony and the parties thereafter live together as husband and wife; and where at the time of such marriage ceremony a former husband or wife of one of the parties was living, and the former marriage with such person was still in force; and where such subsequent marriage contract was entered into by at least one of the parties in good faith, in the full belief that the former husband or wife was dead, or that such former marriage had been annulled by divorce; or without knowledge on the part of one of them of such former marriage; and where the impediment to such subsequent marriage existing by reason of the former marriage is removed by the death of the other party to the former marriage, or by a proper decree of divorce, and the parties to such subsequent marriage then continue living together as husband and wife in good faith, on the part of at least one of them, they shall be taken and deemed to have been legally married from and after the removal of such impediment, and the issue of such subsequent marriage shall be deemed to be the legitimate issue of both parents.

Approved May 29, 1895.

CHAPTER 499 OF THE ACTS OF 1896.

AN ACT RELATIVE TO MARRIAGE AND THE LEGITIMACY OF CHILDREN.

Be it enacted, etc., as follows:

The provisions of chapter four hundred and twenty-seven of the acts of the year eighteen hundred and ninety-five shall apply to cases in which the impediment to marriage therein referred to was removed prior to the date when said act took effect, as well as to cases in which such impediment was removed subsequent to such date: *provided*, that no marriage otherwise valid shall hereby be rendered invalid.

Approved June 5, 1896.

CHAPTER 306 OF THE ACTS OF 1896.

AN ACT RELATIVE TO MARRIAGES.

Be it enacted, etc., as follows :

SECTION 1. Any person duly authorized to solemnize marriages in this Commonwealth who shall join in marriage persons who have not complied with the statutes in regard to procuring certificates of notice of intention of marriage shall be punished by a fine not exceeding five hundred dollars.

SECT. 2. Whoever, not being duly authorized by the statutes of this Commonwealth, undertakes to join persons in marriage in this Commonwealth shall be punished by a fine not exceeding five hundred dollars or by imprisonment in jail or in the house of correction not exceeding one year, or by both such fine and imprisonment.

SECT. 3. Sections twenty-five and twenty-six of chapter one hundred and forty-five of the Public Statutes are hereby repealed.

SECT. 4. No person shall solemnize a marriage in this Commonwealth unless he is able to read and write the English language, and no rabbi of the Israelitish faith shall solemnize marriage until he has filed with the clerk or registrar of the town or city where he resides a certificate of the establishment of the synagogue of which he is rabbi, and of the date of his appointment thereto, and of the term of his engagement.

Approved April 22, 1896.

CHAPTER 424 OF ACTS OF 1897.

AN ACT RELATIVE TO MARRIAGE.

Be it enacted by the Senate and House of Representatives, in General Court assembled, and by the authority of the same, as follows :

SECTION 1. No alteration or erasure shall be made by any person on a certificate of intention of marriage issued by any town clerk, city clerk or registrar, until after the same shall have been returned to the possession of such clerk or registrar, and then only in such form and to such extent as said clerk or registrar may prescribe. Any such certificate may be recorded after correction in accordance herewith. Any person making an illegal alteration or erasure shall be liable to a fine not exceeding one hundred dollars.

SECT. 2. Whenever any certificate of marriage is returned to any town clerk, city clerk or registrar, and has been found to have been incorrectly filled out by the person solemnizing a marriage under the same, such clerk or registrar shall proceed to have the same corrected, and to enforce the penalties, if any, provided by law in relation thereto. All such imperfect certificates shall be recorded and indexed by such clerk or registrar.

SECT. 3. A town by vote and a city by ordinance may authorize its clerk or registrar to pay on demand, in his office, the sum of twenty-five cents to any person legally solemnizing a marriage in this Commonwealth, after the receipt by such clerk or registrar of the certificate in legal form of the solemnization of such marriage. Towns and cities in which the clerks or registrars thereof are authorized to make such payment shall annually appropriate the money necessary therefor, and such clerks or registrars shall file quarterly with the treasurers or other proper financial officers of said towns and cities proper vouchers for all payments made by them under the provisions of this section.

SECT. 4. If either of the parties to an intended marriage has been legally adopted, such party shall, on the notice of intention of such marriage, give the names of his or her parents by such adoption; but the

names of the natural parents of such party may also be added. Whenever the consent of a parent of a minor is required by law as a preliminary to marriage the consent of a parent by adoption of such minor, if any, shall be sufficient. In case the natural parents of a minor have been divorced and the consent of one of such parents is required by law, preliminary to the marriage of such minor, the consent of the parent having the custody of such minor shall be sufficient.

SECT. 5. The words "official station," as used of a person solemnizing a marriage, in chapter three hundred of the acts of the year eighteen hundred and ninety-two, shall be taken and deemed to mean the office by virtue of which said person solemnizes such a marriage; and to describe such office in returns of marriages the words "justice of the peace," "minister of the gospel," "clergyman," "priest," or "rabbi," only shall be used. [*Approved May 22, 1897.*]

CHAPTER 439 OF ACTS OF 1897.

AN ACT RELATIVE TO PUBLIC RECORDS.

Be it enacted by the Senate and House of Representatives, in General Court assembled, and by the authority of the same, as follows:

SECTION 1. The words "public records," when used in this or any other act shall, unless manifestly inconsistent with the context, be construed to mean any written or printed book or paper, or any map or plan of the Commonwealth or of any county, city or town, in or on which any record or entry has been or is to be made in pursuance of any requirement of law, or any written or printed book or paper, or any map or plan which any officer or employee of the Commonwealth or of any county, city or town is required by law to receive, or in pursuance of any such requirement has received for filing, and any book, paper, record or copy mentioned in either of the five following sections. Every such record of the Commonwealth or of a county, city or town, other than maps or plans, consisting of a book, or sheets to be made into a book, in or on which entries are from time to time made or to be made, shall be of paper made of linen rags and new cotton clippings, well sized with animal sizing, and well finished, preference being given to paper of American manufacture marked in water line with the name of the manufacturer. The word "record," in this act without any word of explanation or limitation shall be construed to mean any written or printed book or paper, or any map or plan.

SECT. 2. Every public board and every head consisting of more than one person, in charge of a department or office of the Commonwealth or of a county, city or town, shall designate some person as secretary, who shall enter in books all votes, orders and proceedings of such board, department or office, and shall have the custody of such books; and every such board or head shall designate some employee or employees to have the custody of the other public records pertaining to the work of such board, department or office.

SECT. 3. Every public board, and every head consisting of one person, in charge of a department or office of the Commonwealth or of a county, city or town, having in such department or office any public records, shall have the custody of such records. Every city or town clerk shall have the custody of all records of town proprietaries, and of proprietors of plantations or townships or common lands when the towns, townships or common lands to which such records relate, or the larger part thereof, are within the limits of the city or town of which he is the clerk, and when the proprietors have ceased to be a body politic; also of all records of any church or religious society in such city or town that has ceased to have a legal existence. The secretary of the Commonwealth, clerk of the county commissioners, and city or town clerk, shall respectively have the custody of all other public records of the Commonwealth or of the county, city or town of which he is clerk, when no other disposition of such records is made by law or ordinance.

SECT. 4. Every original paper belonging to the files of the Commonwealth or of any county, city or town, bearing a date earlier than the year eighteen hundred; every book of registry or other book used for recording, belonging to the Commonwealth or to any county, city or town; every deed to the Commonwealth or to any county, city or town; and every report of an agent, officer or committee of the Commonwealth or of any county, city or town, relating to bridges, highways, streets, townways, sewers, or other state, county or municipal interests or matters, not required by law to be entered in a book and not so entered, shall be safely kept, and every other paper belonging to the files of the Commonwealth or of any county, city or town, shall be safely kept for seven years after the latest entry originally made therein or thereon unless required by law to be destroyed at some other time, and no such paper of any county, city or town shall be destroyed unless such destruction is approved by the commissioner of public records.

SECT. 5. Every board of county commissioners, city government, and board of selectmen, may have made for their county, city or town, copies of the records, within or without the Commonwealth, of counties, cities or towns, or town proprietaries, or proprietors of plantations or townships or common lands, relating to lands, easements and rights of way situated in their county, city or town, and copies of the records of births, marriages, deaths and baptisms kept by a church or parish within their city or town.

SECT. 6. Every person having the custody of any public records of a county, city or town, consisting of written or printed books shall, at the expense of the county, city or town, have all such books properly and substantially bound, and shall have any such book left incomplete made up and completed from the files and usual memoranda, so far as it can be done, and shall have any such books becoming worn, mutilated or illegible, seasonably renovated, repaired or rebound, and fair and legible copies thereof seasonably made, and may cause any such books to be placed in the custody of the commissioner of public records, who shall have the work done at the expense of the county, city or town, in a proper and substantial manner.

SECT. 7. Every person having the custody of any public records shall on request for any public record in his custody, furnish the same for inspection and examination under his direction, supervision and care, or under the direction, supervision and care of some person designated by him, and shall on request for a copy of any public record in his custody, and the payment of a reasonable fee, furnish such copy: *provided, however*, that the inspection and furnishing of copies of the public records of a city or town shall be subject to the reasonable ordinances of the city or by-laws of the town.

SECT. 8. Every person having the custody of any public records who under the provisions of any section of this act, shall cause to be made up as aforesaid any public record consisting of a book left incomplete, or shall cause to be made or compared a copy of any public record, shall attest the same and make oath, in the case of such book that it is made up from the usual files and memoranda, and, in the case of such copy that it is a correct copy of the original. Every copy so attested and sworn to shall be admitted in evidence in the same manner and with the same effect as the original.

SECT. 9. Every person who is given by law the custody of any public records shall have power to demand, and shall demand, any such record from the person having the same in his possession, and such person shall forthwith deliver such record to such custodian, and every person having the custody of any public records shall safely keep the same in the rooms in which they are usually used, so arranged that they can be conveniently examined and referred to, and shall keep all such records, when not in use, in the fireproof rooms, vaults or safes provided therefor, except the records in the custody of the teachers of the public schools.

SECT. 10. Every officer or board in charge of a state department, board of county commissioners, city government, and board of selectmen shall, at the expense of the Commonwealth, county, city or town, provide and maintain fireproof rooms, safes or vaults for the keeping as aforesaid

of the public records of their department, county, city or town, other than the records in the custody of teachers of the public schools, and shall hereafter furnish for such rooms only fittings of non-combustible materials.

SECT. 11. Every person having the custody of any public records shall, when succeeded in such custody by another person, forthwith deliver to the successor all public records in his custody which he is not authorized by law to retain, and shall make oath that he has so delivered such records, before, and to be recorded by, the secretary of the Commonwealth, or the clerk of the county commissioners, or the city or town clerk, according as the records so delivered are the records of the Commonwealth, county, city or town.

SECT. 12. Every person who unlawfully keeps in his possession any public record, or removes any public record from the room in which it is usually kept, or violates any of the provisions of this act, or alters, defaces, mutilates or destroys any public record, shall, for each offence, be punished by a fine of not less than ten dollars nor more than five hundred dollars; and every public officer who neglects or refuses to perform any duty required of him by this act shall, for each month of such neglect or refusal, be punished by a fine of not more than twenty dollars.

SECT. 13. The provisions of this act shall not be construed as applying to the records of the general court.

SECT. 14. Chapter thirty-seven of the Public Statutes, section one of chapter two hundred and two of the acts of the year eighteen hundred and eighty-seven, chapter three hundred and seven of the acts of the year eighteen hundred and eighty-eight, chapters two hundred and twenty-seven and three hundred and ninety-two of the acts of the year eighteen hundred and ninety, chapters two hundred and eighty-one and three hundred and forty of the acts of the year eighteen hundred and ninety-one, chapter three hundred and fifty-six and section one of chapter four hundred and two of the acts of the year eighteen hundred and ninety-four, and all acts and parts of acts inconsistent herewith, are hereby repealed. [*Approved May 28, 1897.*]

CHAPTER 444 OF ACTS OF 1897.

AN ACT RELATIVE TO THE REGISTRY AND RETURN OF BIRTHS, MARRIAGES AND DEATHS.

Be it enacted, etc., as follows:

SECTION 1. The clerk of each city and town shall receive or obtain and record the following facts concerning the births, marriages and deaths therein, separately numbering and recording the same, designating the facts hereinafter specified in separate columns as follows:—In the record of births, the date of the record, the date of birth, the place of birth, the name of the child, the sex and color of the child, the names and places of birth of the parents, including the maiden name of the mother, the occupation of the father, and the residence of the parents. In the record of the birth of an illegitimate child the name and other facts relating to the father shall not be recorded unless at the joint request in writing of both father and mother. The term “illegitimate,” shall not be used in the record of a birth unless the fact has been legally determined or upon the sworn statement of both the father and mother. In the record of marriages, the date of the record, the date of the marriage, the place of marriage, the name, residence, and official station of the person by whom the marriage is solemnized, the names and places of birth of the parties married, the residence of each, the age and color of each, the number of the marriage (for example, the first or second marriage), and if previously married whether widowed or divorced, the occupation of each and the names of their parents, with the maiden name of the mother. If the bride is a widow or divorced her maiden name shall also be given. In the record of deaths, the date of the record, the date of the death, the name of the deceased, the sex, the color, the condition (whether single, widowed,

married or divorced), the supposed age, the residence, the occupation, the place of death, the place of birth, the names and places of birth of the parents, the disease or cause of death, the place of burial, with the name of the cemetery if it has any, the maiden name of the mother, and if the deceased was a married or divorced woman or a widow, her maiden name and the name of her husband. In cities the word "residence," as used in this section, shall be held to include the name of the street and the number of the house, if any.

SECT. 2. The clerk of each city and town shall index in separate indexes of births, marriages and deaths the names of all persons recorded as born, married or dead.

SECT. 3. Physicians and midwives shall on or before the fifth day of each month report to the clerk of each city or town a correct list of all children born therein during the month next preceding, at whose birth they were present, stating the date and place of each birth, the name of the child if it has any, the sex and color of the child, the name, place of birth and residence of the parents, the maiden name of the mother, and the occupation of the father. If the child is illegitimate the name of the father shall not be stated, unless at the joint request in writing of both father and mother, which request shall be filed with the returns of births. The fee of the physician or midwife shall be twenty-five cents for each birth so reported, and shall be paid by the city or town in which the report is made, upon presentation of a certificate from the city or town clerk, stating that said births have been reported in conformity with the requirements of this section. Any physician or midwife neglecting to report such list for ten days after it is due shall for each offence forfeit a sum not exceeding twenty-five dollars.

SECT. 4. Any member or servant of a family in which a child is born, having knowledge of the facts required for record concerning the birth of such child, shall furnish the same upon request of the clerk of the city or town wherein such child was born or its parents reside, or of any person authorized by him to obtain such facts. Any such member or servant of a family who refuses to furnish such facts shall for each offence forfeit not exceeding ten dollars.

SECT. 5. The clerk of every city and town shall annually in the month of January ascertain or cause to be ascertained the facts required for record by section one of this act relating to the birth of all children born therein within the year preceding the first day of said January.

SECT. 6. Parents shall, within forty days after the birth of a child, give notice thereof or cause such notice to be given, to the clerk of the city or town in which such child is born. Every householder shall, within forty days after the date of a birth occurring in his house, give notice thereof, or cause such notice to be given to the clerk of the city or town in which he resides; and he shall also, within five days after the date of a death occurring in his house, give notice thereof or cause such notice to be given, to the board of health, other than the selectmen, or if there is no such board, to the clerk of such city or town. The oldest person next of kin present at the time of the death of any of his kindred in the city or town in which such death occurs shall, within five days thereafter, give notice thereof or cause such notice to be given, to such board of health, or if there is no such board, to the clerk of such city or town. The keeper, superintendent or person in charge of a workhouse, house of correction, prison, reformatory, reform school, hospital, almshouse or other institution, public or private, receiving inmates from within or without the limits of the city or town in which it is located shall, when a person is received into the institution of which he is the keeper, superintendent or person in charge, obtain a record of all the facts which would be required for record in the event of the death of such person so received, and shall, on or before the fifth day of each month, give notice to the clerk of said city or town of every birth and death happening among the persons under his charge during the month next preceding. The facts required for record by section one of this act shall, so far as known or obtainable, be included in every notice given under this section.

SECT. 7. The master or other commanding officer of a vessel shall give notice, with the facts required for record, of every birth or death happening among the persons under his charge. In case of a birth the notice shall be given to the clerk, and in case of a death to the board of health, other than the selectmen, or if there is no such board, to the clerk of the city or town within the Commonwealth at which his vessel first arrives after said birth or death.

SECT. 8. Any parent, keeper, superintendent or other person required by section six of this act to give, or cause to be given, notice of a birth or death, who neglects to give the required notice or cause the same to be given, for ten days after it is due, shall for each offence forfeit not exceeding five dollars, and the master or commanding officer of a vessel who neglects to give such notice for ten days after the arrival of his vessel at the port where notice is to be given shall forfeit not exceeding five dollars.

SECT. 9. The clerk of any city or town may enter upon the record already made by him concerning a person born in such city or town any information obtained in writing by the canvass mentioned in section five, or by his own efforts, which is needed to supply deficiencies in said records, but shall make no changes in facts already recorded, except as provided in section fourteen of this act or to correct errors in copying from certificates or returns on file in his office. When an error in copying is corrected a statement of the fact that the correction is made to correct an error in copying shall be entered upon the record over the signature of the clerk.

SECT. 10. A physician who has attended a person during his last illness shall forthwith, after the death of said person, furnished for registration at the request of a duly licensed undertaker or other authorized person, or any member of the family of such deceased person, a certificate, stating to the best of his knowledge and belief the name of the deceased, his supposed age, the disease of which he died, the duration of his last sickness, and the date of his decease; and a physician who has attended at the birth of a child dying immediately thereafter, or a physician or midwife who has attended at the birth of a child born dead, shall forthwith furnish for registration a certificate stating that to the best of his or her knowledge and belief such child either died immediately after birth or was born dead. Both the birth and death of such child shall be recorded, and if the child was born dead the word "stillborn," shall be entered in both the record of birth and death. A physician or midwife who neglects or refuses to make the certificate required by this section or who makes a false statement therein shall forfeit not exceeding fifty dollars.

SECT. 11. A physician who has attended a person in his last illness, in furnishing a certificate for the purpose of registration as required by section ten shall, in case the deceased was a soldier or a sailor who served in the war of the rebellion, give both the primary and the secondary or immediate cause of death as nearly as he can state the same. A physician who refuses or neglects to make such certificate shall forfeit ten dollars.

SECT. 12. Every undertaker or other person having charge of the funeral rites preliminary to the interment of a human body shall forthwith obtain the physician's certificate made in accordance with section ten of this act, and shall enter thereon the facts required by section one of this act to be recorded concerning the deceased, and shall return the same to the board of health, other than the selectmen, or its duly appointed agent; or if there is no such board, to the clerk of the city or town in which the death occurred. The person making such return shall receive from the city or town a fee of twenty-five cents therefor.

SECT. 13. The clerk of each city and town shall forthwith make certified copies of the records of all births and deaths recorded in the books of said city or town during the previous month, whenever the deceased person or the parents of the child born were resident in any other city or town in this Commonwealth or any other state at the time of said birth or death; and shall transmit said certified copies to the clerk of the city or town in which such deceased person or parents were resident at the time of said birth or death, stating in addition the name of the street and number of the house, if any, where such deceased person or parents so resided,

whenever the same can be ascertained; and the clerk of every city or town in this Commonwealth so receiving such certified copies, or certified copies of births, deaths or marriages, from the clerk of a city or town without the Commonwealth, shall record the same in the books kept for recording births, deaths or marriages.

SECT. 14. Whenever the record relating to a birth, marriage or death in the records of any city or town does not contain all the facts required for record, or when it is alleged that the facts are not correctly stated in such record, the clerk of such city or town shall receive a deposition under oath, made by one who was required by law to furnish the information for the original record, or, at his discretion, by three or more credible persons having knowledge of the case, containing such facts as are desired for record. Having received such deposition he shall then file the same, and record said facts in a separate book to be kept for recording such depositions, adding thereto the name and residence of the deponent and the date of such record, and shall thereupon draw a line through the incorrect statements without erasing them, and enter upon the original record the facts needed to amend the record, and forthwith, if a copy of the record has been sent to the secretary of the Commonwealth, forward a certified copy of the corrected record to the secretary upon blanks provided by him for the purpose, who shall thereupon amend the record in his office, and state in the margin thereof his authority for so doing. Reference to the record of the deposition recorded shall be made by the clerk against the original record. The clerk when furnishing a copy of such record shall certify to the facts contained in the record as amended, and shall state in addition that the certificate is issued in accordance with the provisions of this act, and a copy of this section shall be printed on every such certificate. Such deposition, or a certified copy of the record of any other city or town, or of the record made at the time by any person since deceased who was required by law to furnish the evidence of a birth, marriage or death may, at the discretion of the clerk, be made the basis for the record of a birth, marriage or death not previously recorded, and such copy of record may also be made the basis for completing the record of a birth, marriage or death which does not contain all the required facts.

SECT. 15. Any person who wilfully makes a false return in regard to any birth or death shall forfeit not exceeding fifty dollars.

SECT. 16. All the returns of births, marriages and deaths made as provided by law shall be preserved by the city or town clerk and filed and arranged conveniently for examination and reference.

SECT. 17. The clerk of each city and town shall annually give public notice that he is prepared to furnish to parents, householders, physicians and midwives applying therefor, blanks for returns of births as required by law.

SECT. 18. The secretary of the Commonwealth shall, at the expense of the Commonwealth, prepare and furnish to the clerks and boards of health of the several cities and towns, and to the superintendent of the state almshouse, blank books of suitable quality and size, to be used as books of record under this act, blank books for indexes thereto, and blank forms for returns on paper of uniform size: *provided, however*, that any city or town may provide books and forms which shall conform to those prepared by the secretary of the Commonwealth. He shall accompany the same with such instructions and explanations as may be necessary and useful. City and town clerks shall make such distribution of blank forms of returns furnished by the secretary as he shall direct.

SECT. 19. The clerk of each city and town shall annually, on or before the first day of March, transmit to the secretary of the Commonwealth fair and legible certified copies of the records of births, marriages and deaths which have been recorded therein during the year ending on the last day of the preceding December, together with certified copies, upon blanks provided by the secretary, of all such records and corrections in records of births, marriages and deaths, as may not have been previously returned: *provided*, that in cities, except Boston, containing over thirty thousand inhabitants, said copies shall be transmitted on or before the first day of April.

The copies from the city of Boston shall be transmitted on or before the first day of May.

SECT. 20. It shall be the duty of the secretary of the Commonwealth to see that all copies sent to his office under the provisions of section nineteen of this act are written in a fair and legible hand, and any city or town clerk who neglects or refuses to make or cause to be made fair and legible copies as required shall forfeit not less than twenty dollars nor more than one hundred dollars, to be recovered in an action in the name of the secretary of the Commonwealth.

SECT. 21. The record of the city or town clerk relative to a birth, marriage or death shall be *prima facie* evidence in legal proceedings of the facts recorded. A certificate signed by the city or town clerk or assistant clerk for the time being shall be admissible as evidence of such record.

SECT. 22. The superintendent of the state almshouse shall obtain, record and make return of the facts in relation to the births and deaths which occur in his institution, in like manner as is required by town clerks. The clerk of a town in which such almshouse is located shall, in relation to the births and deaths of persons in said almshouse, be exempt from the duties otherwise required of him by this act.

SECT. 23. The secretary shall cause the copies received by him for each year to be bound together in one or more volumes, with indexes thereto. He shall prepare from the copies such tabular results as will render them of practical utility, make report thereof annually to the general court, and do all other acts necessary to carry into effect the provisions of this act.

SECT. 24. Any city or town containing more than ten thousand inhabitants, except the city of Boston, may choose or provide for the appointment of a person other than the clerk to be registrar, who shall be sworn, and to whom all the provisions of this act concerning clerks shall apply. The returns and notices required to be made and given to clerks shall be made and given to such registrar and to the city registrar of the city of Boston under like penalties; and all the provisions of this act concerning clerks shall apply to said last named registrar.

SECT. 25. Whenever any physician, midwife, parent, householder, keeper, superintendent or person in charge of any institution mentioned in section six of this act, or master or other commanding officer of a vessel, neglects to make any of the reports required by the provisions of this act to the clerk or board of health of any city or town, or whenever any person refuses to furnish the facts as required by section four of this act, said clerk shall notify such person of the requirement, and if such person neglects for the period of one month to make said report said clerk shall notify the agent or attorney duly appointed by the city or town to sue in its corporate capacity, or if there is no such agent or attorney the district attorney of his district, of such neglect, who shall thereupon institute proceedings against such person for the recovery of the penalty or forfeiture imposed by this act.

SECT. 26. The city or town clerk shall notify the person authorized to institute proceedings under the preceding section of the violation of any of the provisions of this act within his city or town which comes to his notice, except violations for which he might be liable, and the person so notified shall thereupon institute a prosecution against the person guilty of such violation.

SECT. 27. In any statement of births and deaths printed by authority of a city or town no name of an illegitimate child or its parents or of the parents of a stillborn child shall be printed, but the word "illegitimate" or "stillborn," as the fact may be, shall be used in place thereof. Any city or town which prints the name of a child or either of its parents in violation of this section shall forfeit to the mother of such child not exceeding one hundred dollars.

SECT. 28. All forfeitures recovered under this act shall accrue to the benefit of the city or town in which the return required should have been made, except as provided in sections twenty and twenty-seven.

SECT. 29. The clerk of each city or town, for receiving or obtaining, recording and returning the facts relating to marriages, births and deaths

occurring therein, and for indexing the names, shall be entitled to receive from the city or town, upon presenting a certificate of the receipt of said copy by the secretary of the Commonwealth, for each marriage, twenty cents; for each birth, fifty cents; for each death returned to him by an undertaker or the board of health, twenty cents; for each death not so returned but by him obtained and recorded, fifty cents. He shall also receive from the city or town the following fees:—For each certificate transmitted under the provisions of section thirteen of this act, twenty-five cents; for receiving and recording a deposition and forwarding a copy thereof under the provisions of section fourteen of this act, fifty cents; for sending the notification required by section twenty-five of this act, twenty-five cents; for each oath administered in his capacity as clerk, twenty-five cents. But a city or town containing more than ten thousand inhabitants may limit the aggregate compensation allowed to its clerk. A city or town clerk shall forfeit not less than twenty dollars nor more than one hundred dollars for each refusal or neglect to perform any duty required of him by this act.

SECT. 30. Any of the oaths required by any of the provisions of this act may be administered by the clerk or assistant clerk of any city or town in his official capacity.

SECT. 31. Sections one to four, both inclusive, and sections seven to eighteen, both inclusive, of chapter thirty-two of the Public Statutes; chapter one hundred and fifty-eight of the acts of the year eighteen hundred and eighty-three; sections two, three, four and five of chapter two hundred and two of the acts of the year eighteen hundred and eighty-seven; chapter sixty-three and section one of chapter three hundred and six of the acts of the year eighteen hundred and eighty-eight; chapters two hundred and eight, two hundred and twenty-four and two hundred and eighty-eight of the acts of the year eighteen hundred and eighty-nine; chapter four hundred and two of the acts of the year eighteen hundred and ninety; chapter three hundred and five of the acts of the year eighteen hundred and ninety-two; section one of chapter two hundred and sixty-three of the acts of the year eighteen hundred and ninety-three; chapter two hundred and six and section two of chapter four hundred and two of the acts of the year eighteen hundred and ninety-four, and all acts and parts of acts inconsistent herewith, are hereby repealed.

SECT. 32. This act shall take effect on the first day of January in the year eighteen hundred and ninety-eight. [*Approved June 2, 1897.*]

CHAPTER 84 OF ACTS OF 1857.

AN ACT AUTHORIZING TRANSCRIPTS OF TOWN OR CITY RECORDS.

Be it enacted, etc.

SECTION 1. Any town or city in this Commonwealth may cause to be carefully transcribed such of its records as relate to grants of lands, or the grants or divisions and allotments of lands made by the original proprietors of such township, or to any easements or private rights, or its records relating to ways, or any records of births and marriages, kept by such town or city, or by any parish within the same; and such transcripts, having been first compared and certified, under oath, by the clerk of such town or city for the time being, and deposited in the office of said clerk, shall have the force, effect, and credit of original records.

SECT. 2. Any town or city, whose territory, in whole or in part, has been, or may hereafter be, set off from any other town or city, may cause to be carefully transcribed such of the records, named in the first section of this act, as relate to lands, easements, rights or ways situated in the territory so set off; and such transcripts, being compared and certified, under oath, by the clerk of the town or city where

such records are kept, and deposited in the clerk's office of the town or city in which the land is situated to which they relate, shall have the force, effect, and credit of original records of such last named town or city.

SECT. 3. The records of any town or city shall be open to the free access and examination of any suitable person appointed to transcribe therefrom, in accordance with section second of this act; and the clerk of such town or city, shall, for a reasonable fee to be paid therefor, compare and certify such transcripts, when properly and correctly made.

SECT. 4. The clerk of every city and town in this Commonwealth shall make a certified copy of the record of all marriages, recorded in the books of said city or town, where either or both of the parties married, were resident in any other town in the Commonwealth at the time of said marriage; and he shall also, as far as the same is practicable, make a like copy of all such marriages recorded in any parish records, or in any records kept by any clergyman or magistrate within said town; and the said clerk shall transmit said certified copies to the clerk of the city or town in which such party or parties were resident at the time of said marriage, and the clerk so receiving such certified copies shall record the same in a book to be kept for that purpose. And the clerks of the several cities and towns shall receive a reasonable compensation for the services so rendered, to be paid by their respective cities or towns: *provided, however*, that the provisions of this section shall apply only to marriages solemnized prior to the year eighteen hundred. [Approved April 24, 1857.

CHAPTER 15, OF THE PUBLIC STATUTES.

OF THE EXECUTIVE DEPARTMENT AND THE SECRETARY OF THE COMMONWEALTH.

SECT. 12. The secretary shall have the custody of the state seal; and copies of records and papers in his office, certified by him and authenticated by the state seal, shall be evidence in like manner as the originals.

CHAPTER 389 OF ACTS OF 1898.

AN ACT RELATIVE TO OFFICIAL SEALS AND CERTIFICATES.

Be it enacted, etc., as follows:

SECTION 1. The city of Boston shall provide for use by the registrar of births, deaths and marriages of said city an official seal, and said registrar shall attest all certificates from records in his custody with said seal.

SECT. 2. Every town shall provide for the use of its town clerk an official seal, bearing the name of the town and the date of its incorporation, and of such general design as may be approved by the selectmen thereof.

SECT. 3. Said registrar and every city and town clerk, when furnishing a copy of any record of births, deaths or marriages in his charge, shall furnish the same under the official seal of the city or town, as the case may be.

SECT. 4. This act shall take effect on the first day of January in the year eighteen hundred and ninety-nine. [Approved April 29, 1898.

CHAPTER 453 OF ACTS OF 1898.

AN ACT TO PROVIDE FOR THE CUSTODY OF CERTAIN RECORDS,

Be it enacted, etc., as follows :

SECTION 1. When a church, parish, religious society, monthly meeting of the people called Friends or Quakers, or any similar body of persons who have associated themselves together for the purpose of holding religious meetings, shall cease for the term of two years to hold such meetings, the persons having the care of any of the records or registries of such body, or of any officers thereof, shall deliver all such records to the clerk of the city or town in which such body is situated, and such clerk may certify copies thereof.

SECT. 2. If any such body the records or registries of which, or of any officers of which, have been so delivered, shall resume meetings under its former name, or shall be legally incorporated, either alone or with some similar body, the clerk of said city or town shall, upon demand, made in writing, by a duly authorized person, deliver such records or registries to such person; *provided, however*, that such person shall in writing certify that to the best of his knowledge and belief said meetings are to be continued, or such incorporation has been legally completed.

SECT. 3. Every person who after demand made by the clerk entitled by law to have possession of the records or registries aforesaid wrongfully detains the same, shall on petition of such clerk to the superior court sitting in equity be directed to deliver the same to said clerk.

SECT. 4. Nothing in this act shall be construed to apply to the custody of any records essential to the control of any property or trust funds belonging to any body of persons mentioned in this act.

SECTION 5. This act shall take effect upon its passage. [*Approved May 24, 1898.*]

CHAPTER 510 OF ACTS OF 1898.

AN ACT TO PROVIDE A PENALTY FOR THE VIOLATION OF THE LAW
RELATIVE TO THE USE OF STANDARD RECORD INKS FOR PUBLIC
RECORDS.

Be it enacted, etc., as follows :

Section one of chapter three hundred and seventy-eight of the acts of the year eighteen hundred and ninety-four is hereby amended by adding at the end thereof the following: "Any person violating the provisions of this section shall be punished by a fine of not exceeding fifty dollars,"—so that the section shall read as follows:

"SECTION 1. No person having the care or custody of any book of record or registry in any of the departments or offices of the Commonwealth or of any city, county or town therein, shall use or allow to be used upon such books any ink excepting such as is furnished by the secretary of the Commonwealth. Any person violating the provisions of this section shall be punished by a fine of not exceeding fifty dollars." [*Approved June 8, 1898.*]

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ANNUAL REPORT
OF THE
SEALING OF WEIGHTS AND MEASURES
DEPARTMENT
FOR THE YEAR 1897-98.

BOSTON, February 1, 1898.

HON. JOSIAH QUINCY,

Mayor of the City of Boston :

SIR: In compliance with the requirements of the Revised Ordinances, I herewith submit the annual report of the Sealing of Weights and Measures Department.

The force of the department consists of one sealer, ten deputy sealers, one messenger and one helper.

Appropriation for the fiscal year 1897-98	\$23,000 00
Transfers	431 31
Total appropriations	<u>\$23,431 31</u>

CLASSIFICATION OF EXPENSES.

Salaries, messenger and helper's pay	\$20,133 08
Horse board	1,872 00
Shoeing of horses	194 26
Medical attendance for horses	48 75
Repairs on wagons, harnesses, etc.	409 75
Tools, hardware, etc.	202 56
Stationery	103 70
Printing	193 70
Telephone service	151 25
Electric lighting	9 17
Advertising	39 37
Ferry tolls	14 00
Repairing standards	24 87
Incidentals	34 85

Total expenditures from February 1, 1897, to February 1, 1898	<u>\$23,431 31</u>
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Section 1 of chapter 123 of the Acts of 1876 provides that the sealer of weights and measures shall annually give public notice, by advertisement, or by posting notices in one or more public places, to all inhabitants or persons having a usual place of business therein, who use scales, weights, or measures, for the purpose of selling any goods, wares, merchandise, or other commodities, or for public weighing, to bring in their scales, weights, and measures to be adjusted and sealed.

The same section also provides that "in those cities and towns where a salary is paid to the sealer of weights and measures no fees shall be charged for such services."

In compliance with the provisions of the foregoing section, it is customary for the Sealer to notify annually, in May, all such persons as are referred to by the statutes, by publishing the required notice in the daily papers, to bring to this office their scales, weights and measures, to be tested and sealed.

Section 2 of chapter 123 of the Acts of 1876, amended by section 2 of chapter 151 of the Acts of 1877, provides that at any time after said notice the said Sealer of Weights and Measures shall go to the houses, stores, and shops of persons mentioned in the foregoing section, who have neglected to comply with the notice given thereunder, and having entered the same, with the assent of the occupants, shall adjust and

seal their scales, weights, and measures, and shall be entitled to receive for said service the compensation set forth in chapter 51, section 14, of the General Statutes.

The customary notice having been published, after a reasonable time the deputy sealers were instructed to visit the places where scales, weights and measures were in use; and having informed the owners thereof that it was optional with them whether their scales, etc., should be tested at this office or at their places of business, and in the former case no charge would be made for such services, proceeded thereafter, with their consent to test and seal the same.

The schedule of fees for work done outside the office is as follows :

FOR TESTING.

Platform scales (5,000 lbs. capacity and upwards)	. \$1 00
“ “ (less than 5,000 lbs. capacity)	. 50
Dormant “ (“ “ “ “ “)	. 50
Beam “ (capacity over 1,000 lbs.)	. 50
Counter platform scale (large size)	. 50
“ “ “ (small size)	. 25
Butchers' scale, spring balance, counter-balance, or trip scale, each	. 03
Weights, each	. 03
Measures, wet or dry, each	. 03
Yardsticks, each	. 03

ADJUSTING.

For adjusting or repairing any scale, a fair and reasonable compensation.

For weights when either light or heavy, not to exceed ten cents each.

For yardsticks, not to exceed five cents each.

For measures, wet or dry, when either large or small, not to exceed ten cents each.

For adjusting or repairing any special weight or measure, not mentioned above, a fair and reasonable compensation.

OPERATIONS OF THE DEPARTMENT FROM FEBRUARY 1, 1897, TO FEBRUARY 1, 1898.

Number of scales 5,000 lbs. to 150 tons tested	. 676
“ dormants less than 5,000 lbs. “	. 639
“ beef-track scales tested	. 234
“ portable platforms tested	. 3,887
“ counter “ “	. 1,078

Carried forward 6,514

<i>Brought forward</i>	6,514
Number of spring balances tested	3,403
“ trip scales “	3,597
“ counter-balances “	1,274
“ public weighers’ scales tested	26
“ beams or balances “	348
Total number scales tested	<u>15,162</u>

Number of scales tested and found correct	11,418
Number of scales tested and adjusted before seal- ing	2,842
Number of scales tested and tagged for repairs	860
Number of scales that were repaired as ordered	649
Number of scales that were condemned	40
Total number of scales tested	<u>15,809</u>

Number of weights tested and found correct	39,035
Number of weights tested and found light and adjusted	7,725
Number of weights tested and found heavy and adjusted	888
Number of weights tested and condemned	115
Total number of weights tested	<u>47,763</u>

Number of dry measures tested and found correct, ...	8,200
“ “ “ “ “ adjusted	133
“ “ “ “ “ condemned	256
Total number of dry measures tested	<u>8,589</u>

Number of wet measures, including milk cans, tested and found correct	111,206
Number of wet measures, including milk cans, tested and adjusted	5,947
Number of wet measures, including milk cans, tested and condemned	3,979

Total number of wet measures, including milk cans, tested	<u>121,132</u>
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Number of yardsticks tested and found correct	1,404
“ “ “ “ adjusted	380
“ “ “ “ condemned	264

Total number of yardsticks tested	<u>2,048</u>
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Number of charcoal baskets tested and found correct	19
Number of charcoal baskets tested and condemned, ...	8

Total number of charcoal baskets tested	<u>27</u>
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Number of coal baskets tested and found correct	475
“ “ “ “ condemned	40

Total number of coal baskets tested	<u>515</u>
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Number of steel tapes tested	<u>13</u>
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The system of testing and sealing at their places of business gives general satisfaction. Many, however, object to the charges, and send their scales, etc., to this office, and in this way the following work has been done, which is included in the “operation of the department,” and for which no fees are allowed.

The amount of work done in the office from February 1, 1897, to February 1, 1898, was as follows:

Scales of all descriptions tested	1,800
Weights tested	6,738
Dry measures tested	2,018
Wet measures, including milk cans, tested	112,951
Yardsticks tested	851
Charcoal baskets tested	27
Coal baskets “	471
Steel tapes “	<u>13</u>

RECAPITULATION.

Total number of scales tested from February 1, 1897, to February 1, 1898	15,162
Total number of weights tested from February 1, 1897, to February 1, 1898	47,763

Total number of dry measures tested from February 1, 1897, to February 1, 1898	8,589
Total number of wet measures, including milk cans, tested from February 1, 1897, to February 1, 1898	121,132
Total number of yardsticks tested from February 1, 1897, to February 1, 1898	2,048
Total number of charcoal baskets tested from February 1, 1897, to February 1, 1898	27
Total number of coal baskets tested from February 1, 1897, to February 1, 1898	515
Total number of steel tapes tested from February 1, 1897, to February 1, 1898	<u>13</u>

EARNINGS OF THE DEPARTMENT.

Total amount of earnings from February 1, 1897, to February 1, 1898	\$5,706 65
The amount due this department is	<u>280 80</u>

Amount collected, which has been paid to the City Collector to be credited to the Department of Weights and Measures	<u>\$5,425 85</u>
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INVENTORY OF PROPERTY IN THE SEALER'S OFFICE BELONGING TO THE CITY OF BOSTON, FEBRUARY 1, 1898.

Standard Avoirdupois Balances.

1 balance and cabinet furnished by the Commonwealth to Suffolk County, in the custody of the Boston Sealer; capacity, 100 lbs.

1 balance and cabinet furnished city of Boston by the Commonwealth; capacity, 100 lbs.

1 balance, sensitive to $\frac{1}{4}$ grain; capacity, 16 lbs.

1 dormant scale, capacity, 2,700 lbs.

1 platform balance, capacity, 300 lbs., sensitive to $\frac{1}{4}$ oz.

1 balance for testing 50-lb. weights, sensitive to 1 grain.

Standard Troy Balances.

1 bank gold balance, sensitive to $\frac{1}{4}$ grain; capacity, \$10,000.

1 jewellers' balance, sensitive to $\frac{1}{16}$ grain; capacity, 12 lbs.

1 apothecaries' balance, sensitive to $\frac{1}{16}$ grain; capacity, 8 lbs.

1 apothecaries' prescription balance, sensitive to $\frac{1}{1000}$ grain, capacity, 3 oz.

Standard Metric Balances.

1 short-beam analytical balance, with aluminum beam, bows and pans; agate bearings, with adjustable shelf for supporting beaker with water, when taking specific gravities sensitive to $\frac{1}{20}$ of a milligram; capacity, 400 grammes.

Standard Avoirdupois Weights.

1 set of steel weights, 5, 10, 20, 25 and 50 lbs.; 5 weights.

1 set brass weights, from 1 drachm to 4 lbs.; 12 weights. (The above-named weights belong to Suffolk County.)

1 set of steel weights, 5, 10, 20, 25 and 50 lbs.; 5 weights.

1 set brass weights, from 1 drachm to 4 lbs.; 12 weights.

Standard Troy Weights.

1 box of gold weights, from \$1,000 to \$5,000; 17 weights.

1 box of gold weights, from 10 dwts. to 3,000 dwts.; 11 weights.

1 box of gold weights, from 10 dwts. to 1,000 dwts.; 9 weights.

1 box of gold weights, from 10 dwts. to 500 dwts.; 9 weights.

1 box of gold weights, from $\frac{1}{2}$ dwt. to 500 dwts.; 19 weights.

1 box of gold weights, from $\frac{1}{100}$ grain to 1,000 grains; 23 weights.

1 box of gold weights, from $\frac{1}{100}$ grain to 240 grains; 19 weights.

1 box of gold weights, from $\frac{1}{100}$ grain to 10 grains; 10 weights.

1 box of gold weights, from $\frac{1}{100}$ grain to 10 grains; 9 weights.

1 set of cup weights, from $\frac{1}{4}$ oz. to 128 oz.; 11 weights.

1 set of cup weights, from $\frac{1}{4}$ oz. to 19 oz.; 8 weights.

1 set of diamond weights, from $\frac{1}{64}$ of carat to 300 carats; 17 weights.

Metric Weights.

1 box of weights, from 10 milligrams to 1 kilogram; 21 weights.

1 box of weights, from 1 milligram to 100 grains; 25 weights.

1 box of weights, from 50 kilograms to 200 kilograms; 6 weights.

1 box containing 1 kilogram.

Apothecary Weights.

- 1 box of weights, from $\frac{1}{2}$ scruple to 1 oz.; 7 weights.
- 1 set of weights, from $\frac{1}{2}$ scruple to 2 drachms; 6 weights.

Standard Measures of Length.

- 1 metric meter.
- 1 U. S. standard yard measure.

Standard Dry Measure.

- 1 set of iron measures, from 1 qt. to $\frac{1}{2}$ bushel. (5 measures.) Suffolk County standards.
- 1 set of iron measures, from 1 qt. to $\frac{1}{2}$ bushel. (5 measures.)
- 1 set of iron measures, from 1 qt. to $\frac{1}{2}$ bushel. (5 measures.) City of Boston standards.

Standard Liquid Measures.

- 1 set of iron measures, from 1 gill to 1 gall. (6 measures.) Suffolk County standards.
- 1 set of iron measures, from 1 gill to 1 gall. (6 measures.)
- 1 set of iron measures, from 1 gill to 1 gall. (6 measures.) City of Boston standards.

*Duplicates of the Standard Weights and Measures.**Working Sets.*

- 7 sealers' try scales.
- 2 even balances.
- 8 boxes of brass weights, from $\frac{1}{16}$ oz. to 4 lbs. (79 weights.)
- 1 set of steel weights, from 5 to 50 lbs. (5 weights.)
- 6 sets of brass hook weights, from 1 lb. to 16 lbs. (36 weights.)
- 140 U. S. standard 50-lb. weights.
- 1 box brass troy weights. (6 weights.)
- 1 set of apothecaries' weights, from 1 grain to 6 drachms. (21 weights.)
- 8 sets copper liquid measures, from 1 gill to 1 gall. (48 measures.)
- 2 three-gallon copper measures.
- 1 two-gallon copper measure.
- 28 copper dry measures, from 1 gill to 1 qt.
- 1 set of copper dry measures, from 1 qt. to $\frac{1}{2}$ bushel. (5 measures.)

- 1 copper measure with nozzle, $\frac{1}{2}$ bushel.
- 4 brass yardstick measures.
- 4 charcoal-basket measures.
- 1 upright drill.
- 7 bench drills.
- 1, 2, yardstick.
- 2 diamonds for marking milk jars.

Horses, Wagons, Tools, etc.

- 6 horses.
- 7 wagons.
- 1 pung.
- 7 sets of harnesses.

Complete outfit for horses, wagons, etc., miscellaneous tools.

Office Furniture.

Safe, wardrobe-closet, umbrella-stand, chairs, 2 desks, work-benches, 2 clocks, counters, racks, stationery, water-cooler, 1 letter-press and stand.

Respectfully submitted,

DANIEL P. SULLIVAN,
Sealer of Weights and Measures.



ANNUAL REPORT
OF THE
SINKING FUNDS DEPARTMENT
FOR THE YEAR 1897-98.

BOARD OF COMMISSIONERS OF SINKING FUNDS,

CITY HALL, June 6, 1898.

HON. JOSIAH QUINCY,

Mayor of the City of Boston :

SIR: The Board of Commissioners of Sinking Funds have the honor of presenting the following report, showing the transactions during the year ending January 31, 1898 :

Amount of cash in treasury January 31, 1897,	\$2,515,537 13
Receipts during the year	4,874,163 99
	\$7,389,701 12
Payments during the year	3,199,681 15
Amount of cash January 31, 1898	\$4,190,019 97
Total amount of investments January 31, 1897,	\$22,851,050 00
Investments purchased during the year	2,278,300 00
Carried forward	\$25,129,350 00 \$4,190,019 97

<i>Brought forward</i>	. \$25,129,350 00	\$4,190,019 97
Investments matured during the year	1,741,000 00	
		<u>23,388,350 00</u>
Amount of funds January 31, 1898	. \$27,578,369 97	

With this report will be found the report of the Treasurer, the annual statement of the Board, showing debt and funds, and a statement covering the work for seventeen years, with the report of the examiner.

Respectfully submitted,

HENRY R. REED,

Chairman.

BOSTON, February 25, 1898.

To the Board of Commissioners of Sinking Funds of City of Boston :

GENTLEMEN : The undersigned herewith presents his annual report as Treasurer of the Board of Commissioners of Sinking Funds for the year 1897-98 :

Balance of Cash, January 31, 1897			\$2,515,537 13
Received in 1897-98:			
Interest on Bank Deposits		\$48,898 64	
Interest on Investments		998,044 90	
Interest on Sterling Debt redeemed in London		107,055 65	
Revenue from Betterments, sales of Land, etc.		56,916 92	
Revenue from Laying Out and Construction of Highways		37,648 23	
Revenue from Neponset Valley Sewer System		100,000 00	
Appropriation for Debt, 1897-98		1,344,675 00	
Premium on Loans negotiated		246,529 65	
Income from Cochituate Water Works for Debt Requirement		193,395 00	
Investments matured		1,741,000 00	
			<u>4,874,163 99</u>
			\$7,389,701 12
Disbursed in 1897-98:			
City Treasurer, for redemption of Debt	\$920,289 81		
Cost of redemption of Debt in London, England	1,091 34		
		\$921,381 15	
Investments purchased		2,278,300 00	
			<u>3,199,681 15</u>
Cash Balance January 31, 1898			<u>\$4,190,019 97</u>

SINKING FUNDS DEPARTMENT.

3

RESOURCES OF THE SINKING FUNDS, JANUARY 31, 1898.

Sinking Fund.	Cash.	Investments.	Total Resources.
Consolidated Street Improvement	\$655,421 50	\$1,464,200 00	\$2,119,621 50
New Public Library, Special	259,859 94	331,000 00	590,859 94
Twenty-Year	822,646 03	5,429,070 00	6,251,716 03
Ten-Year	1,386,307 42	2,522,500 00	3,908,807 42
Public Park	76,630 43	862,300 00	938,930 43
“ “ Special	172,882 94	1,445,100 00	1,617,982 94
New Cambridge Bridge	6,301 47	60,000 00	66,301 47
Stony Brook Improvement	11,824 22	121,060 00	132,824 22
Improved Sewerage, Special	113,947 48	98,000 00	211,947 48
New Ferry Landing	6,836 18	.....	6,836 18
Laying Out and Construction of Highways ..	82,310 89	619,500 00	701,810 89
Rapid Transit	16,654 07	247,000 00	263,654 07
“ “ Charlestown Bridge, No. 1 ..	13,006 20	13,300 00	26,306 20
“ “ “ “ “ “ “ “ 2 ..	11,778 00	.....	11,778 00
Blue Hill and Other avenues	5,142 30	249,500 00	254,642 30
School Houses, No. 1	13,653 00	.....	13,653 00
“ “ “ “ “ “ “ “ 2 ..	15,363 92	57,000 00	72,363 92
South Union Station	22,518 73	.....	22,518 73
Suffolk County, Court-House	6,485 57	420,000 00	426,485 57
“ “ General	37,124 67	20,000 00	57,124 67
Cochituate Water	423,880 01	9,428,880 00	9,852,760 01
Sewerage Loan	29,445 00	.....	29,445 00
	\$4,190,019 97	\$23,388,350 00	\$27,578,369 97

DEBT LIABILITIES OF THE SINKING FUNDS.

Classification of Debt.	Liabilities, Jan. 31, 1897.	Debt issued in 1897-98.	Debt paid in 1897-98.	Liabilities, Jan. 31, 1898.
Consolidated Street Improve- ment	\$1,731,051 59	.....	\$145,289 81	\$1,585,761 78
New Public Library, Special ..	2,000,000 00	.....	.....	2,000,000 00
Twenty-Year	17,684,475 00	\$943,000 00	275,000 00	18,352,475 00
Ten-Year	5,253,500 00	896,800 00	.....	6,150,300 00
Public Park	2,918,300 00	.....	.....	2,918,300 00
“ “ Special	8,700,000 00	500,000 00	.....	9,200,000 00
New Cambridge Bridge	250,000 00	.....	.....	250,000 00
Stony Brook Improvement	600,000 00	400,000 00	.....	1,000,000 00
New Ferry Landing	30,000 00	112,800 00	.....	142,800 00
Laying Out and Construction of Highways	3,350,000 00	900,000 00	.....	4,250,000 00
Rapid Transit	3,300,000 00	1,200,000 00	.....	4,500,000 00
Rapid Transit, Charlestown Bridge, No. 1	150,000 00	600,000 00	.....	750,000 00
Rapid Transit, Charlestown Bridge, No. 2 .....	.....	200,000 00	.....	200,000 00
Blue Hill and other avenues ..	2,500,000 00	.....	.....	2,500,000 00
School-Houses, No. 1	500,000 00	.....	.....	500,000 00
“ “ “ “ “ “ “ “ 2 ..	500,000 00	650,000 00	.....	1,150,000 00
South Union Station	25,000 00	1,575,000 00	.....	1,600,000 00
Suffolk County, Court-House ..	2,921,000 00	.....	.....	2,921,000 00
“ “ General	64,000 00	.....	.....	64,000 00
Cochituate Water	18,261,273 98	150,000 00	500,000 00	17,911,273 98
Sewerage Loan .....	.....	500,000 00	.....	500,000 00
Improved Sewerage	500,000 00	.....	.....	500,000 00
	\$71,238,600 57	\$8,627,600 00	\$920,289 81	\$78,945,910 76

SINKING FUND RESOURCES, JANUARY 31, 1898.

CASH AND INVESTMENTS.

Cash deposited in Banks and Trust Companies, January 31, 1898.			
NATIONAL BANKS.			
Atlantic.....	\$43,470 77		
Atlas.....	62,880 87		
Blackstone.....	64,384 98		
Boston.....	62,129 46		
Boylston.....	62,738 00		
Broadway.....	37,338 32		
Bunker Hill.....	43,549 81		
Central.....	63,086 50		
Columbian.....	66,957 10		
Commercial.....	20,262 92		
Continental.....	67,133 99		
Eliot.....	40,124 92		
Everett.....	35,347 37		
Faneuil Hall.....	167,220 47		
First.....	270,660 22		
First Ward.....	27,264 64		
Fourth.....	50,237 69		
Freemans.....	35,003 55		
Globe.....	166,888 76		
Lincoln.....	90,150 86		
Manufacturers.....	30,702 39		
Mechanics.....	25,678 29		
Merchants.....	350,094 25		
Metropolitan.....	26,913 59		
Monument.....	26,920 03		
Mount-Vernon.....	27,673 55		
National Bank of the Commonwealth.....	66,373 76		
" " " North America.....	65,236 41		
" Eagle Bank.....	34,782 55		
" Exchange Bank.....	59,034 65		
" Hide and Leather Bank.....	66,412 02		
" Market Bank of Brighton.....	25,411 56		
" Rockland Bank.....	44,847 85		
" Security Bank.....	36,756 08		
" Union Bank.....	58,669 58		
" Webster Bank.....	199,341 48		
New England.....	72,915 33		
North.....	58,858 83		
Old Boston.....	40,122 83		
Peoples.....	27,256 87		
Second.....	67,458 74		
Shawmut.....	80,233 42		
Shoe and Leather.....	41,589 22		
State.....	401,174 48		
Third.....	78,798 41		
Washington.....	40,122 73		
Winthrop.....	36,369 28		
		\$3,566,579 38	
TRUST COMPANIES.			
American Loan and Trust Company.....	\$70,167 18		
Boston Safe Deposit and Trust Company.....	99,947 17		
Beacon Trust Company.....	10,031 29		
Columbia Trust Company.....	31,498 39		
International Trust Company.....	59,816 55		
Massachusetts Loan and Trust Company.....	70,023 98		
Mercantile Loan and Trust Company.....	20,869 19		
New England Trust Company.....	104,736 91		
Old Colony Trust Company.....	105,585 76		
Puritan Trust Company.....	25,384 67		
United States Trust Company.....	25,379 50		
		623,440 59	
		\$4,190,019 97	
INVESTMENTS JANUARY 31, 1898.			
City of Boston 4% Bonds.....	\$12,496,350 00		
" " " 3 1/2% " 	3,079,000 00		
" " " 3 1/2% " 	29,000 00		
" " " 3% " 	309,000 00		
	\$15,913,350 00		
Carried forward.....	\$15,913,350 00	\$4,190,019 97	

SINKING FUND RESOURCES, JANUARY 31, 1898. — *Concluded.*

<i>Brought forward</i>		\$15,913,350 00	\$4,190,019 97
Cochituate Water $\frac{6}{100}$ Bonds	\$3,302,000 00		
“ “ “ $\frac{4}{100}$ “	2,431,000 00		
“ “ “ $\frac{3\frac{1}{2}}{100}$ “	400,000 00		
“ “ “ $\frac{3}{100}$ “	200,000 00	6,333,000 00	
County of Suffolk $\frac{4}{100}$ Bonds	\$496,000 00		
“ “ “ $\frac{3}{100}$ “	646,000 00	1,142,000 00	
			23,388,350 00
Total Resources January 31, 1898.....			<u>\$27,578,369 97</u>
INVESTMENT ACCOUNT.			
Amount of Investments January 31, 1897	\$22,851,050 00		
Purchased in 1897-98:			
City of Boston $\frac{4}{100}$ Bonds	\$583,300 00		
“ “ “ $\frac{3\frac{1}{2}}{100}$ “	695,000 00		
“ “ “ Temporary Loan.....	1,000,000 00	2,278,300 00	
			\$25,129,350 00
Matured in 1897-98:			
City of Boston $\frac{5}{100}$ Bonds	\$124,000 00		
“ “ “ $\frac{4}{100}$ “	100,000 00		
“ “ “ Temporary Loan	1,000,000 00		
		\$1,224,000 00	
Cochituate Water $\frac{6}{100}$ Bonds.....		500,000 00	
County of Suffolk $\frac{3}{100}$ Bonds.....		17,000 00	
			1,741,000 00
Amount of Investments January 31, 1898.....			<u>\$23,388,350 00</u>

STATEMENT

OF THE CASH RECEIPTS AND DISBURSEMENTS OF ALFRED T. TURNER, TREASURER
OF THE BOARD OF COMMISSIONERS OF SINKING FUNDS OF THE CITY OF BOSTON
FROM JULY 16, 1881, TO JANUARY 31, 1898, INCLUSIVE.

Amount of Cash received from C. H. Dennie, Treasurer, July 16, 1881.....		\$1,365,928 20
Cash receipts:		
July 16, 1881 to April 30, 1882.....	\$3,696,475 98	
May 1, 1882 “ “ “ 1883.....	4,955,195 34	
“ 1, 1883 “ “ “ 1884.....	4,997,400 18	
“ 1, 1884 “ “ “ 1885.....	4,291,180 57	
“ 1, 1885 “ “ “ 1886.....	3,418,975 23	
“ 1, 1886 “ “ “ 1887.....	4,663,236 32	
“ 1, 1887 “ “ “ 1888.....	4,229,152 62	
“ 1, 1888 “ “ “ 1889.....	6,388,433 83	
“ 1, 1889 “ “ “ 1890.....	4,859,804 01	
“ 1, 1890 “ “ “ 1891.....	6,040,412 79	
“ 1, 1891 “ Jan. 31, 1892.....	8,854,593 85	
Feb. 1, 1892 “ “ “ 1893.....	10,163,938 71	
“ 1, 1893 “ “ “ 1894.....	8,825,587 39	
“ 1, 1894 “ “ “ 1895.....	3,859,602 59	
“ 1, 1895 “ “ “ 1896.....	3,503,808 09	
“ 1, 1896 “ “ “ 1897.....	5,549,707 11	
“ 1, 1897 “ “ “ 1898.....	4,874,163 99	
		93,171,668 60
		<u>\$94,537,596 80</u>
Cash disbursements:		
July 16, 1881 to April 30, 1882.....	\$2,619,174 81	
May 1, 1882 “ “ “ 1883.....	5,988,629 28	
“ 1, 1883 “ “ “ 1884.....	4,774,324 39	
“ 1, 1884 “ “ “ 1885.....	2,864,567 54	
“ 1, 1885 “ “ “ 1886.....	4,527,025 97	
“ 1, 1886 “ “ “ 1887.....	5,398,858 89	
“ 1, 1887 “ “ “ 1888.....	2,734,208 80	
“ 1, 1888 “ “ “ 1889.....	4,590,541 89	
“ 1, 1889 “ “ “ 1890.....	5,727,351 99	
Carried forward.....	\$39,233,683 56	<u>\$94,537,596 80</u>

STATEMENT. — *Concluded.*

<i>Brought forward</i>	\$39,233,683 56	\$94,537,506 80
May 1, 1890 to April 30, 1891.....	5,805,116 34	
" 1, 1891 " Jan. 31, 1892.....	6,157,852 45	
Feb. 1, 1892 " " " 1893.....	10,704,092 71	
" 1, 1893 " " " 1894.....	10,937,072 56	
" 1, 1894 " " " 1895.....	6,275,546 27	
" 1, 1895 " " " 1896.....	2,981,044 88	
" 1, 1896 " " " 1897.....	5,053,486 91	
" 1, 1897 " " " 1898.....	3,199,681 15	
		90,347,576 83
		\$4,190,019 97

ALFRED T. TURNER,
Treasurer.

BOARD OF COMMISSIONERS OF SINKING FUNDS.

Henry R. Reed, <i>Chairman</i>	term ends May 1, 1900.
Charles H. Cole	term ends May 1, 1900.
John H. Sullivan	term ends May 1, 1899.
Charles E. Morrison	term ends May 1, 1899.
Samuel Johnson	term ends May 1, 1898.
Nathaniel J. Rust	term ends May 1, 1898.

CITY OF BOSTON,

BOARD OF COMMISSIONERS OF SINKING FUNDS,

CITY HALL, April 15, 1898.

The Committee on Accounts of this Board, appointed to examine the investments of the Sinking Funds, having completed its examination, report that they find the amount of bonds stated by the Treasurer, viz., \$23,388,350, is correct.

SAMUEL JOHNSON,

CHAS. E. MORRISON,

Committee on Accounts.

REPORT OF EXAMINER.

BOSTON, May 3, 1898.

To the Board of Commissioners of Sinking Funds of the City of Boston:

GENTLEMEN: After a critical examination of the books and accounts of your Treasurer, Alfred T. Turner, and comparing the items and their totals with his report to you, I found, to speak briefly, every statement in said report to be correct.

Balance of cash morning of February 1, 1897,	\$2,515,537 13
Received during the year to January 31, 1898,	4,874,163 99

	<u>\$7,389,701 12</u>
Paid during the same period	3,199,681 15

Balance February 1, 1898	<u>\$4,190,019 97</u>
------------------------------------	-----------------------

The amounts in the several banks and trust companies as recorded in your Treasurer's report, exactly agree with the balances shown by the deposit books.

To above balance cash as February 1, 1898, add receipts to April 18, 1898, inclusive	344,582 01
--	------------

	<u>\$4,534,601 98</u>
Paid from February 1 to April 18	374,000 00

Balance cash evening of April 18	<u>\$4,160,601 98</u>
--	-----------------------

I visited every bank and trust company but one, and have from every one, a written, signed statement of the balance held by them on the evening of April 18, a detailed recital of these is attached hereto, the sum of them exactly agrees with the amount called for by the balance of cash.

I verified the amounts received from the banks and trust companies for interest on deposits from the pass books of the several banks.

The bonded debt of the city is \$1,000 more than the amount expressed in the report, it is a note due in 1874 and in the Treasury of the city is cash to meet it when presented.

I did not see the securities held by you,

Faithfully,

GEO. T. STODDARD,

Accountant.

BALANCES IN BANKS AND TRUST COMPANIES TO THE CREDIT OF THE
BOARD OF COMMISSIONERS SINKING FUNDS ON EVENING OF
APRIL 18, 1898.

Atlantic National	\$43,685 44
Atlas National	63,193 12
Blackstone National	64,702 99
Boston National	62,436 34
Boylston National	63,047 86
Broadway National	37,522 73
Bunker Hill National	43,764 91
Central National	63,398 12
Columbian National	67,287 81
Commercial National	20,362 97

<i>Carried forward.</i>	<u>\$529,402 29</u>
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<i>Brought forward</i>	.	.	.	.	.	\$529,402	29
Continental National	.	.	.	.	.	67,465	51
Eliot National	.	.	.	.	.	40,323	02
Everett National.	.	.	.	.	\$35,560	88	
Interest allowed not charged	.	.	.	.	38	90	
						35,521	98
Faneuil Hall National	.	.	.	.	.	168,046	56
First National	.	.	.	.	.	271,720	26
First Ward National	.	.	.	.	.	27,401	18
Fourth National	.	.	.	.	.	50,485	84
Freemans National	.	.	.	.	.	35,176	47
Globe National	.	.	.	.	.	167,713	15
Lincoln National	.	.	.	.	.	90,596	17
Manufacturers National	.	.	.	.	.	30,854	04
Mechanics National	.	.	.	.	.	25,805	14
Merchants National	.	.	.	.	.	302,177	82
Metropolitan National.	.	.	.	.	.	27,046	52
Monument National	.	.	.	.	.	27,052	97
Mount Vernon National	.	.	.	.	.	27,810	18
National Commonwealth	.	.	.	.	.	66,701	73
National North America	.	.	.	.	.	65,558	43
National Eagle	.	.	.	.	.	34,956	75
National Exchange	.	.	.	.	.	59,326	21
National Hide and Leather	.	.	.	.	.	66,739	49
National Market, Brighton	.	.	.	.	.	25,537	03
National Rockland	.	.	.	.	.	45,069	36
National Security	.	.	.	.	.	36,940	15
National Union	.	.	.	.	.	58,959	32
National Webster	.	.	.	.	.	200,326	19
New England National	.	.	.	.	.	73,275	34
North National	.	.	.	.	.	59,149	62
Old Boston National	.	.	.	.	.	40,321	01
Peoples National	.	.	.	.	.	27,393	38
Second National	.	.	.	.	.	67,791	94
Shawmut National	.	.	.	.	.	80,629	76
Shoe and Leather National	.	.	.	.	.	41,794	63
State National	.	.	.	.	.	402,952	31
Third National	.	.	.	.	.	79,187	65
Washington National	.	.	.	.	.	40,320	61
Winthrop National	.	.	.	.	.	36,549	44

TRUST COMPANIES.

American Loan and Trust Company	.	.	.	.	70,513	77
Boston Safe Deposit and Trust Company	.	.	.	.	100,440	65
International Trust Company	.	.	.	.	60,111	93
Massachusetts Loan and Trust Company	.	.	.	.	70,369	67
Mercantile Loan and Trust Company	.	.	.	.	20,973	70

Carried forward. \$3,856,489 17

<i>Brought forward</i>	.	.	.	.	\$3,856,489	17
New England Trust Company	.	.	.	.	105,254	23
Old Colony Trust Company	.	.	.	.	106,107	29
Beacon Trust Company	.	.	.	.	10,080	72
Columbia Trust Company	.	.	.	.	31,653	94
Puritan Trust Company	.	.	.	.	25,511	80
United States Trust Company	.	.	.	.	25,504	83
						\$4,160,601 98



ANNUAL REPORT
OF THE
DEPARTMENT OF MUNICIPAL STATISTICS
FOR THE
NINE MONTHS ENDING JANUARY 31, 1898.

71 CITY HALL,
BOSTON, MASS., February 1, 1898.

HON. JOSIAH QUINCY,

Mayor of the City of Boston.

SIR: In compliance with the provisions of the Revised Ordinances, we have the honor to submit the following report of the work of this department for the nine months ending January 31, 1898:

The ordinance establishing the department took effect May 1, 1897, and on May 3 the members of the Board met and organized by choosing Laurence Minot as chairman, and Edward M. Hartwell as secretary *pro tempore*. Offices were secured and furnished in City Hall, and the services of a stenographer engaged.

As this department was the first of its kind to be established in this country, and the ordinance establishing it directed us in general terms only to collect and publish such statistics relating to the city of Boston and such statistics relating to other cities and useful for comparison as might be of public interest, our first duty was to determine in what manner the work could best be approached.

As a preliminary to this determination, it was necessary to make a general review of the work of the city, and of the statistical information already available. This accomplished, the next matter to occupy our attention was the organization of our office force. Numerous candidates offered themselves for the position of secretary, and other candidates who had not offered their services were considered. It was finally determined to offer the position to Dr. Edward M. Hartwell, at that time Director of Physical Training in the Boston public schools, and already known to you as having made investigations in Europe preliminary to the establishment of this department. He accepted the position and assumed the duties of his office on September 1. This appointment involved his resignation from the Board, and the vacancy caused thereby has not yet been filled.

The real work of the department may therefore be said to have begun on the first of September. Since that time relations have been established with numerous cities abroad and in this country, and a valuable collection of municipal reports has been got together.

Investigation and discussion of the various departments of the city have continued, especially with a view to a statistical presentation, in a weekly or monthly bulletin and in a series of special bulletins, of the departmental expenditures in their relation to the work accomplished; and numerous tables have been compiled experimentally. None of these tables are yet in shape for publication, for the reason that none of them as yet have fully met our requirements. Each table so far prepared has, however, been suggestive of further improvements and has been of use in assisting us to put our material in available shape. We have now in proof a series of tables showing the estimated and actual expenditure of each city department for the past five years, together with the corresponding appropriations. These tables as a whole will present a summarized view of the ordinary expenses of the city; that is to say, of those expenses which repeat themselves each year in practically the same form, and which are provided for out of the taxes and other current revenues of the city.

Although the work of the department has not yet so far advanced as to enable us to present any definite results to the public, it may be interesting to review briefly some of the matters which we have had under consideration, and some of the conditions which we have found to exist.

It has been customary to classify the expenses of the city according to the departments having them in charge. It

seemed to us that the general public were not so much interested in knowing the channel through which the expenses were paid as in knowing what work had been accomplished for their safety or convenience, and what that work had cost. With a view to examining the city expenditures from this standpoint, it seemed desirable at the outset to examine the scope of the city government and to classify its functions; for, without first ascertaining the functions which the government undertakes to fulfil, it is impossible to make comparisons either from year to year or with other cities, for the reason that the functions fulfilled are not the same in all cases. An examination was therefore made of the functions of the city government of Boston at different periods of its history, of the governments of other American cities and of cities in Europe. This examination brought to our notice a great variety of conditions, and suggested that a classification of functions might be made in such a way as to illustrate not only the increased demands upon the government in established departments, but the marked extension of the field of municipal activity. An outline of such a classification has been attempted, based on the character and extent of the service rendered, with somewhat the following result:

I. *Central Organization*, including

- | | | |
|-----------------------|--|--------------------|
| 1. Town or City Hall. | \| | 4. Treasurer. |
| 2. Executive head. | \| | 5. Clerk. |
| 3. Legislative head. | \| | 6. Law Department. |

II. *Public Safety*.

- | | | |
|-------------------------|--|-------------------------------|
| 1. Militia. | \| | 5. Inspection of buildings. |
| 2. Police or watch. | \| | 6. Fire patrol. |
| 3. Lighting of streets. | \| | 7. Penal institutions (jail). |
| 4. Petty courts. | | |

III. *Public Health*.

- | | | |
|---------------------|--|------------------------|
| 1. Health officers. | \| | 5. Removal of garbage. |
| 2. Quarantine. | \| | 6. Drainage. |
| 3. Cemeteries. | \| | 7. Hospitals. |
| 4. Street cleaning. | | |

IV. *Public Education*.

- | | | |
|-------------|--|---------------|
| 1. Schools. | \| | 2. Libraries. |
|-------------|--|---------------|

V. Public Convenience.

- | | |
|----------------------------|-----------------------------|
| 1. Maintenance of streets. | 7. Weights and measures. |
| 2. " " bridges. | 8. Regulation by license or |
| 3. " " ferries. | inspection: |
| 4. Water supply. | a. of liquor traffic, |
| 5. Markets. | b. of other trades. |
| 6. Dock facilities, | |

VI. Public Charities.

- | | |
|-----------------|------------------------|
| 1. Poor relief. | 3. Other institutions. |
| 2. Almshouse. | |

VII. Public Recreation.

- | | |
|-----------------|------------------|
| 1. Parks. | 4. Music. |
| 2. Playgrounds. | 5. Celebrations. |
| 3. Baths. | |

Such a classification is tentative only, and includes only the ordinary or "housekeeping" expenses of the city; but it is a convenient guide to enable us to establish the quality and amount of service rendered in each field, and to compare the different costs at different periods in different cities. An interesting correspondence has been entered into with Dr. L. S. Rowe, of the University of Pennsylvania, who has for some years been studying this same question of classification, and many valuable suggestions have been received from him. Unfortunately, no such system has ever been practised in Boston, and the reports of the various departments are rendered in such a way as to make it extremely difficult to compile any satisfactory figures for this purpose. These reports have been drafted by different officials at various times, and each has reported upon those matters only which have chiefly occupied his attention during the year, or about which the public desired at the moment to be informed. No uniform system of reporting has been followed, either with respect to the same department in different years, or with respect to different departments in the same year. This is not due to any neglect on the part of those in charge of the departments, but solely to the fact that a scientific and comparative investigation of city work has never as yet been undertaken; and the system of reports, both financial and descriptive, is an outgrowth of time and not the result of a previously determined plan by which they would co-operate to present the affairs of the city in a scientific manner.

As an instance of the difficulty of securing accurate information it was found, on comparing the list of real estate owned by the city as published by one department, with the same list published by another department, that discrepancies in the areas of the different estates existed; in one list, such discrepancies existed in four cases out of every ten. That is to say, a lot of land reported by the School Committee as containing 20,000 square feet, might be reported by the Public Buildings Department as containing 21,000 square feet and by the Assessors as containing 19,000 square feet. A list of these various discrepancies has been compiled and sent to the various departments, with the suggestion that all the reports be made to conform to each other and to the best information obtainable. As another instance, it appeared to us desirable in a certain connection to ascertain the area of public and private property in the different wards of the city. But it was found that no compilation existed of the areas of streets by wards, and that after computing the street area of the whole city, and adding to it the area of all other public property such as schools, engine-houses, parks, etc., and the area of private property as determined by the Assessors for purposes of taxation, the total obtained did not by any means correspond with the total area of the city. In fact, it may fairly be said that no information exists as to areas in the city of Boston sufficiently accurate to be worth publishing.

To remedy this, we have joined with some of the other departments in requesting the City Engineer to prepare a map of the city from the best information now obtainable. This map will be based upon the map already begun by the Board of Survey, which divides the city into sections of one thousand feet square measured from the State House as a centre. There are in the neighborhood of one thousand of these sections. There will be a map of each section on a scale of fifty feet to the inch, showing the area and character of the streets and of all holdings of public or private property. These maps will be prepared on tracing cloth, and prints will be furnished to the Street and Water Departments for use in carrying on their work. The cost of these maps is not very great, and they will afford a permanent basis of computation enabling us to readily obtain the areas of any desired section of the city. It will then be possible to determine the conditions of physical development in any ward or part of a ward; that is to say, to what extent it is supplied with streets either paved or macadamized, with sidewalks, hydrants, lights, water-pipes and sewers, schools and engine-houses; what the expense of providing and maintaining these has been; and

what has been the resulting effect upon the growth of the neighborhood as determined by its population, its assessed value, or the number of buildings erected. It will further be possible to apportion the cost of paving, lighting and cleaning the streets to different sections of the city. No account is now kept of this except as to the whole city and the Superintendent of Streets is desirous of co-operating with us in establishing some method of exhibiting these expenses in detail and by districts. In this connection, a correspondence has been had with the President of the Barber Asphalt Paving Company, which has made a practice of building sections of street in various parts of the country and guaranteeing to keep them in repair for a certain number of years. The President was kind enough to give us some very valuable suggestions as to his methods of keeping track of the results and cost of their work in the great detail which such a method of doing business necessitates.

Another matter which has occupied our attention has been that of establishing a proper understanding of the system of municipal indebtedness which has, in recent years, become so marked a feature of our annual expenses.

One of the fundamental defects not only in our municipal reports but in public discussion of municipal finance, is the failure to distinguish between income from money borrowed and from taxation, and between money spent for current expenses and for permanent improvements. Few statistics of value on this subject exist in this country, and but little notice is practically taken of the difference. Yet in the management of private business or large corporations, a nice judgment of these questions is the very essence of success; and no one fact so readily affects the credit and standing of an individual or a corporation as do judgment and habits regarding this single point.

From the standpoint of true economics, money raised by taxation is income, and money spent for current expenses is an outgo, while with borrowed money the process is reversed, — money borrowed becoming a charge, and money spent on the plant becoming an asset. There is consequently a vital error in classing borrowed money and taxes together as income, and in classing current expenses and additions to plant together as expenditures.

There is no existing account of the city property showing its cost in detail, nor the extent to which it has been paid for, — nothing, that is, which corresponds with the trial balance of a business corporation; nor is there anything to show what sums have been annually expended from the tax

levy for improvements and additions to the city's property. We know, in a general way, that in early years nearly a quarter of the city's annual income was expended for improvements of a more or less permanent nature; while to-day, every such expense is met by loan. Believing that a city, like a private corporation, requires a certain investment of capital for the establishment of the plant necessary to the carrying on of its business, and that this investment must increase not only with the growth of the city, but with the increased scope of its activities, — we have begun an examination of the city accounts from the year 1822 (the first year of the city government and the first year of the creation of a permanent debt) to the present time, in order to determine the cost of the plant; its value, as nearly as may be, as a going plant for municipal purposes; and the allowances which have been made for depreciation by payment, from time to time, of the debt incurred therefor. The work has proved tedious, and the data obtainable are not what we could wish; but we fully believe in the great value of the work, and that whatever inaccuracies may of necessity be found in it, it will at least be of value in calling attention to its great importance, and to the need of providing for its continuance on a more accurate basis.

A difficulty which met us at the very outset of our investigations, and which has not yet been satisfactorily solved, is that, while the expenditures of any one department as stated in the Auditor's Report agree as to the totals with the expenditures as stated in the department reports, the classification of the items of expense is subject to wide variation; and the classification in the reports of the departments themselves has greatly varied from year to year as the personnel of the department has changed. These discrepancies, due in large part to the desire of each succeeding official to improve upon and amplify the accounts of his predecessor, in the laudable desire to furnish the public with all information possible about his department, have made it extremely difficult, if not impossible, to compile from the published reports any comparison of expenditures in their relation to work performed, which would be just and fair to all parties concerned. Something has, however, been accomplished in this line with respect to the Public Institutions. The recent change in the management of these institutions afforded an opportunity to start in with a system of accounts which would be not only satisfactory to the departments but valuable for statistical purposes; and, with that end in view, the following uniform classification of accounts has been adopted after due

consultation. There is in course of preparation a small list or pamphlet designed as a manual for accountants, to show the various items of expenditure, and the headings under which they should be grouped in accordance with this system. It is hoped that in time some similar arrangement may be made with the other departments. The classification is not intended to preclude other or more detailed classifications for the use of those in charge of the expenditures, but it is intended that these shall be so arranged as to be capable of recasting on a uniform basis for purposes of comparison.

CLASSIFICATION OF ACCOUNTS.

Public Institutions of the City of Boston.

(Compiled by the Department of Municipal Statistics.)

1. Salaries and wages.
2. Food.
3. Clothing, including material and findings.
4. Bedding.
5. Fuel.
6. Light.
7. Medical supplies (including surgical):
 - a. Liquors.
 - b. Other supplies.
8. Furniture and upholstery.
9. Household supplies.
10. Agricultural — (farm, garden, live-stock, stable and grounds).
11. Industries — (machinery, tools and supplies used in industrial department).
12. Instruction and amusement:
 - a. Religious services.
 - b. School supplies.
 - c. Entertainment of inmates.
 - d. Library supplies.
13. Telephone and telegraph.
14. Ice.
15. Water.
16. Tobacco and snuff.
17. Laundry supplies:
 - a. Soap.
 - b. Other supplies.
18. Office supplies:
 - a. Postage.
 - b. Office books and stationery.
 - c. Printing.
 - d. Advertising.

19. Repairs and improvements.
20. Insurance.
21. Miscellaneous :
 - a. Freight.
 - b. Transportation.
 - c. Burial expenses.
 - d. Entertainment of city government.
 - e. Others as they may arise.

The general statement of the city accounts imposed upon the Auditor is in many respects unsystematic, for the reason that the City Council have at various times adopted for this or that department a system of financial provisions not uniform with the usual practice of the city. There has been in most cases some justification for this, having in view only the special requirements of the case in hand, but the result has been a lack of uniformity which the best efforts of the Auditor have been unavailing to counteract. Some causes of confusion are detailed in the following letter to Your Honor, and certain suggestions have been made as to uniformity. These we understand have met with your approval and that of the Auditor, and now await the sanction of the City Council.

DEPARTMENT OF MUNICIPAL STATISTICS,
71 CITY HALL, January 6, 1898.

HON. JOSIAH QUINCY,
Mayor of the City of Boston.

SIR: I wish to offer some suggestions in regard to the form of the city accounts, with a view to making them simpler and easier to understand.

There should be an account to be known as the General Treasury, into which should be carried in summarized form all the receipts of the city, and out of which should be paid in summarized form all the expenses of the city. This account should be kept in four parts, as shown by the enclosed table, the object of which is to show the main outlines of the city finances for the year.

Examining this table in detail, we find in Part I., "Ordinary Receipts and Expenses," the balance of cash on hand at the beginning of the year available for general purposes; the receipts of current income from all sources, such as taxes, rents, interest, fees, licenses, profit on water works, etc.; and the ordinary department expenses, which may be stated either as so much actually spent for each department, or by carrying out short and

showing the appropriation for each department, with the resulting surplus or deficit to make it equal the actual expenditure. The balance remaining will be available for general purposes in the following year. This account will balance within itself unless there is a deficit, which must be made good from the extraordinary income.

In Part II., "Extraordinary Receipts and Expenses," we begin the year with unexpended balances of special appropriations. The receipts include the proceeds of bonds sold, and the sales of real estate. The payments include all authorized expenditures from special appropriations, and may be stated simply as expenditures; or, as in the previous part, each appropriation may be made to balance and show the surplus or deficit. The balance at the end of the year shows the amount of special appropriations not then expended.

Part III., or "Trust Funds," contains a complete history of that department of the city finances, and should be subdivided into Capital and Income.

Part IV., or "Book-keeping Items," includes all suspense accounts, such as pay-roll tailings, tax titles, protested betterments and other unsettled items, and all items which pass through the treasury as through a conduit, such as the State tax, State share of liquor licenses, the bank tax, moneys in transit to or from the sinking-funds, etc.; and it may conveniently include the temporary loans, issued and paid within the year, which have no permanent effect on the city finances. This account will of course balance within itself.

The advantage of this system of accounts is that it shows at a glance the main features of the city's financial history by (1) eliminating the book-keeping items, which are not of consequence; (2) by clearly defining the difference between ordinary expenses and permanent investments; and (3) by separating the trust funds. Taken in connection with the report of the Sinking-Funds Commissioners, it gives a complete financial history. It does away entirely with the system of transfers, which now makes the city accounts so complicated that very few people can understand them.

At present, the Auditor's estimate of current receipts for the year, on which the appropriation order is based, does not include all the current income of the city; that is to say, there are certain balances carried over from one year to another in the departments, and there are certain receipts at the disposal of some of the departments outside of their appropriations. Transfers are made from the appropriation for one department to the appropriation for another department, and are made within the departments from one appropriation to another. Transfers are also made back and forth from special appropriations to regular department appropriations, and the appropriations are increased by transfers from the Reserved Fund and from Surplus Income. It results that the appropriation for any department seldom shows

the amount really available to meet the expenses of that department. It is necessary to look further to see what additional credits may arise from any of the following sources :

1. From previous department balances ;
2. From special income of the department ;
3. From contributions of outsiders ;
4. From transfers from the Reserve Fund ;
5. From transfers from Surplus Income ;
6. From transfers from other departments ;
7. From transfers from special appropriations ;

and to see how these credits may be diminished by transfers to other appropriations. I see no reason why any balances should be carried forward in the departments from one year to another, nor any reason why any receipts should be credited directly to the departments instead of to the General Treasury.

I enclose a statement of the balances which were carried forward in the departments for the last two years, and statements of the income for the same period credited directly to the departments without passing through the treasury. I also enclose a draft of the changes necessary in the appropriation order to carry out this method of book-keeping. The wording of any special orders in the Council will also have to be changed, so as to make transfers from the General Treasury instead of directly from one appropriation to another. I take it, however, that no difficulty will be found in making these amendments.

Another matter which complicates a clear understanding of the accounts, and especially makes it difficult to state in statistical form the amount and character of the work accomplished with the money expended, is that work done for or material supplied to one department by another department is not properly charged. It seems to me that in this respect the departments of the city should be treated as strangers to one another ; that is to say, if the Public Buildings Department does certain electrical construction work for the Hospital Department, a bill should be sent to the latter in the same manner as if the work were performed by a private citizen. Possibly that method is followed in this particular instance ; but I know there are instances in which this practice has not been carried out, and, if you desire, I can hunt up some of these cases. I write now merely to state the principle.

Very respectfully,

(Signed)

LAURENCE MINOT,
Chairman.

STATEMENT OF DEPARTMENTAL RECEIPTS, 1895-96.

Board of Aldermen, Soldiers' Relief.

From the State	\$141,661 37	
Reimbursement on account of burials of indigent soldiers, etc.	3,554 50	\$145,215 87

Health Department.

Evergreen Cemetery:		
Sale of lots and graves	\$1,036 12	
Care of lots	447 25	
Sale of wood	25 00	
		1,508 37

Hospital Department.

Income of Trust Funds	1,400 00
---------------------------------	----------

Library Department.

Sales of catalogues, fines, etc.	\$14,217 61	
Income of Trust Funds	10,245 50	24,463 11

Mt. Hope Cemetery Department.

Fees	\$15,569 22	
Sale of lots	4,577 25	
Income of Trust Funds	1,855 42	22,001 89

Park Department.

Care and repairs of Commonwealth avenue	5,000 00
---	----------

Printing Department.

Sale of stock, postage stamps, etc.	11,864 91
---	-----------

Public Buildings Department.

Rent of Armory, West Newton street	1,725 00
--	----------

Public Celebrations.

Income of Trust Funds	397 41
---------------------------------	--------

School Committee.

Travelling expenses of deaf pupils	2,096 85
--	----------

Street Department.

Paving Division, repairs of streets	18 56
---	-------

\$215,691 97

STATEMENT OF DEPARTMENTAL RECEIPTS, 1896-97.

Hospital Department.

Income of Trust Funds	\$1,400 00
---------------------------------	------------

Library Department.

Sales of catalogues, fines, etc.	\$4,177 41
Rent, Old Library Building	6,698 53
Income of Trust Funds	4,729 66
	15,605 60

Mount Hope Cemetery Department.

Income of Trust Funds	2,079 08
---------------------------------	----------

Park Department.

Care and repairs of Commonwealth avenue	5,000 00
---	----------

Police Department.

Liquor license receipts in excess of estimate	217,346 25
---	------------

Printing Department.

Sales of stock, postage stamps, etc.	11,378 06
--	-----------

Public Buildings Department.

Electrical Division:	
For labor and materials	\$20,804 12
Rent of Armory, West Newton street	400 00
	21,204 12

Public Celebrations.

Income of Trust Funds	365 62
---------------------------------	--------

Reserved Fund.

Refunded damages	327 76
----------------------------	--------

School Committee.

Travelling expenses of deaf pupils	2,822 38
--	----------

Street Department.

Bridge Division (not detailed)	\$870 42
Paving Division:	
Repairs of streets	2,472 85
	3,343 27

Street Laying-Out Department.

Improvement at Brazer Building	75 00
--	-------

	\$280,947 14

STATEMENT OF DEPARTMENTAL BALANCES CARRIED FORWARD.

1895-96.

Board of Aldermen, Soldiers' Relief	\$125,878 58
Library Department	6,323 81
Mt. Hope Cemetery Department	950 02
Interest on Debt	84,066 94
County Tax, Interest	312 23
	\$217,531 58

1896-97.

Board of Aldermen, Soldiers' Relief	\$129,783 15
Library Department	10,328 19
Interest on Debt	124,243 80
County Tax, Interest	312 23
	\$264,667 37

AMENDMENTS SUGGESTED FOR THE APPROPRIATION AND
TAX ORDER FOR THE COMING YEAR.

Referring to the order for 1896-97, paragraph 1 should be amended so as to read in part — "That all sums of money which form no part of the income of the city, but shall be contributed to promote the objects of any appropriation, or to pay for services rendered or work done by any department for any other department, or for any person or corporation other than the city of Boston — be paid into the General Treasury and credited to such appropriation, or to the appropriation of the department rendering such service or performing such work."

The last line of paragraph 2 would be more clear by inserting the words "out of" so as to read "and out of taxes to the amount of \$11,780,171."

Paragraph 6 should be amended by striking out the words "be turned into the treasury as a part of the income of the city, or" and should read "that the proceeds thereof be paid to the Board of Commissioners of Sinking-Funds."

Paragraph 8 should read — "That the City Auditor from time to time during the year may, with the approval of the Mayor, return to the General Treasury any part of an appropriation for current expenses not needed to meet such expenses, and at the end of the year shall return to the General Treasury all unused balances of appropriations for current expenses; and may credit to the appropriation for any division of a department any sums which may have been previously returned to the General Treasury from any other division of the same department; and may, with the further

approval of the Committee on Finance, return any unused portion of the Reserved Fund to the General Treasury, and credit any portion so returned to any appropriation for current expenses; and that said Auditor may, with the approval of the Mayor, between December 1, 1898, and February 1, 1899, credit any part of the income and taxes not disposed of to any appropriation for current expenses, and at the end of the year shall apply any of the income and taxes not disposed of to the closing of the accounts for the financial year."

GENERAL TREASURY ACCOUNT.

Financial Statement for 1896-97.

	Balance.	Receipts.	Total.
1. Ordinary . . .	\$398,212 63	\$18,143,896 78	*\$18,542,109 41
2. Extraordinary . .	2,705,546 65	8,816,356 63	*11,521,903 28
3. Trust Funds . . .	354,423 25	78,496 29	432,919 54
4. Book-keeping Items	88,597 14	9,703,875 10	9,792,472 24
	\$3,546,779 67	\$36,742,624 80	\$40,289,404 47
	Expenditures.	Balance.	Total.
1. Ordinary . . .	\$18,053,379 59	\$440,176 52	*\$18,493,556 11
2. Extraordinary . .	7,675,487 94	3,894,968 64	*11,570,456 58
3. Trust Funds . . .	67,741 24	365,178 30	432,919 54
4. Book-keeping Items	9,698,945 49	93,526 75	9,792,472 24
	\$35,495,554 26	\$4,793,850 21	\$40,289,404 47

GENERAL TREASURY ACCOUNT.

Ordinary Receipts and Expenditures, 1896-97.

RECEIPTS:

Cash on hand February 1, 1896:		
Excess of income	\$24,508 58	
Excess of income of Water Works . .	109,036 68	
Department balances	264,667 37	
		\$398,212 63
Cash Receipts:		
Taxes, and other current income . .	\$15,655,769 71	
Less money refunded and to be re- funded, transferred to Book- keeping Items	10,175 32	
	\$15,645,594 39	
Income of Water Works	2,498,302 30	
		18,143,896 78
		\$18,542,109 41

*These sub-totals do not balance with the corresponding sub-totals on the other side of the account, because \$48,553.30 of Ordinary receipts was transferred to and used for Extraordinary expenditures.

EXPENDITURES:

Cash payments:		
Expenditures for ordinary purposes,	\$15,970,706 33	
Water Works, current expenses	2,082,673 26	
		\$18,053,379 59
Cash on hand February 1, 1897:		
Excess of income	\$260,567 68	
Department balances	179 608 84	
		440,176 52
		\$18,493,556 11
Transferred to meet deficiencies in extraordinary expenses		48,553 30
		\$18,542,109 41

GENERAL TREASURY ACCOUNT.

Extraordinary Receipts and Expenditures, 1896-97.

RECEIPTS.

Cash on hand February 1, 1896:		
Balances of special appropriations		\$2,705,546 65
Cash receipts:		
Loans issued	\$8,274,800 00	
Sale of Basin V to Commonwealth	518,975 74	
From street railways for paving between tracks	21,527 14	
Abolishment of grade crossings	153 75	
Improvement at Brazer Building	900 00	
		8,816,356 63
		\$11,521,903 28
Amount transferred from ordinary receipts		48,553 30
		\$11,570,456 58

EXPENDITURES.

Cash Payments:		
City buildings	\$60,472 43	
Fire department	10,349 33	
Institutions	358,854 95	
Library	79,283 52	
Markets	7,362 25	
Parks	444,616 70	
Police	57,794 54	
Public travel (streets, ferries and bridges)	3,594,851 63	
Rapid transit	1,465,100 74	
Schools	729,655 37	
Sewers	203,685 74	
Statues and monuments	1,200 00	
Water supply	507,113 31	
Cemeteries	7,009 38	
Parade ground	692 40	
Wire department	47,970 94	
New registration of voters	99,474 71	
		\$7,675,487 94
Cash on hand February 1, 1897:		
Balances of special appropriations		3,894,968 64
		\$11,570,456 58

It is believed that a more frequent presentation to the public of certain facts relating to the city will tend to a closer scrutiny of public affairs by the citizens, and to that end we have had under consideration the publication of a monthly bulletin on lines already adopted in many European cities. The following are some of the matters which it is intended to include in this publication:

Meteorological statistics; statistics relating to the movement of population, *i.e.*, changes in number and character of the population through deaths, births, marriages and divorces; immigration statistics; statistics showing the number, character and movement of the defective, criminal, helpless and pauper classes of the community, as shown by returns from hospitals, prisons, reformatories, asylums, etc.; educational statistics; labor statistics; commercial statistics, relating to Boston as a port of entry and point of distribution of commodities; financial statistics; market statistics; statistics relating to the relief of the poor through public and private instrumentalities; statistics relating to the prevention, detection and punishment of crime; statistics relating to public works, *e.g.*, parks, laying-out of streets, etc.; statistics with regard to the erection and alteration of buildings and transfers of real estate; and, from time to time, consideration of election statistics, and statistical surveys of the principal activities of the various departments of the city government.

The United States Weather Bureau, the Immigration Commissioner, the Collector of Customs, the Boston Chamber of Commerce, the Boston Stock Exchange, the Real Estate Exchange and Auction Board, the Massachusetts General Hospital, and other institutions have kindly agreed to co-operate with us by furnishing monthly statistics from their own records; and the various city departments have done the same. In some departments, however,—notably the Registry Department, which has charge of recording births, deaths and marriages,—the statistics which we require are not now compiled; and in other departments, compilations are made once a year and not monthly. But it is hoped these difficulties may be overcome. The statistics relating to the employment of labor, which it is believed will be of special value and public interest, cannot be obtained from any city department; but it is hoped that sufficient information may be forthcoming from labor unions, intelligence offices, and from numerous private charitable organizations, to enable us to present a showing which, though far from complete, will yet be of some value.

Our attention has not been confined to the financial statistics of the city for, although it appears that these now occupy more of the public attention than other matters of statistical interest, yet in other cities it has been not infrequently found that the most valuable part of the work of statistical bureaus has been in the way of vital and sanitary statistics. For instance, in Buda-Pest, an examination into the conditions of living in the city with regard to drainage, cleanliness, over-crowding, and personal habits, and the measures adopted as the result of such examination, were largely instrumental in bringing about the reduction in the death rate from 43.1 to the thousand inhabitants of Pest in 1870, to 24.6 per thousand in Buda-Pest in 1895.

At the request of a sub-committee of the School Committee, appointed to examine into the matter of alleged over-pressure in the schools, we have undertaken a compilation of statistics in regard to the effect of school life upon the children in the public schools, with a view of ascertaining if there are any indications of overwork or over-confinement. Some new and interesting material has already been gathered, and the way paved for a more thorough examination of this very interesting subject.

In compliance with the suggestion made in your inaugural address and with further instructions given to this department, we have compiled and issued four numbers of "The City Record," an official gazette of the executive departments of the city of Boston. These numbers were issued weekly, and contained a record of all Board meetings and of all official action taken by any single head of a department, all messages of the Mayor to the City Council, such communications from the different departments as were deemed of interest or as our space permitted, notices of all legislative action affecting the city, of all bids received and contracts awarded; all the city advertising; and weekly statistics from the Board of Health, city institutions, and the Building Department, and much other matter of public interest. The editing of this publication was thrust upon us somewhat suddenly, and has caused a suspension — which we hope may be only temporary — of other work which we had in hand.

Our office force now consists of a secretary, chief clerk, editorial clerk, stenographer and boy. We append a statement of our expenditures, and a copy of the ordinance establishing the department:

STATEMENT OF EXPENDITURES.

Credit.

Transferred from Reserved Fund,	\$1,500 00	
“ “ Surplus Revenue,	703 20	
		\$2,203 20

Debit.

Secretary	\$1,000 00	
Clerk-hire	787 50	
Printing	120 04	
Stationery and postage	146 26	
Typewriter	90 50	
Travelling expenses of secretary,	58 90	
		\$2,203 20

Respectfully submitted,

LAURENCE MINOT, *Chairman*,
 DAVIS R. DEWEY,
 B. RODMAN WELD,
 SUMNER B. PEARMAIN,
 WILLIAM JACKSON, *ex officio*.

ORDINANCES OF 1897, CHAPTER 2, CONCERNING
THE ESTABLISHMENT OF A DEPARTMENT OF
MUNICIPAL STATISTICS.

[In the Year One Thousand Eight Hundred and Ninety-seven.]

AN ORDINANCE TO AMEND THE REVISED ORDINANCES OF
1892 BY PROVIDING FOR A STATISTICS DEPARTMENT.

Be it ordained by the City Council of Boston, as follows:

A department of municipal statistics is hereby established, to be in charge of a board of six members, of whom the City Engineer shall, *ex officio*, be one, and the remaining five members shall be appointed by the mayor. The members of said board may be appointed by the mayor at any time after the date of the passage of this ordinance, to serve until the first day of May next. On or before said first day of May, eighteen hundred and ninety-seven, the mayor shall appoint, subject to confirmation by the Board of Aldermen, one member to serve for the term of five years, one for the term of four years, one for the term of three years, one for the term of two years, and one for the term of one year, each term beginning with said first day of May; and annually after the current year one such member shall be appointed as aforesaid for the term of five years, beginning with the first day of May in the year of his appointment. Said board shall collect, compile, and publish such statistics relating to the city of Boston, and such statistics of other cities, for purposes of comparison, as they may deem of public importance.

IN BOARD OF ALDERMEN, February 20, 1897.

Passed. Sent down for concurrence.

JOHN H. LEE, *Chairman pro tem.*

IN COMMON COUNCIL, February 25, 1897.

Concurred.

JOSEPH A. CONRY, *President.*

Approved February 27, 1897.

JOSIAH QUINCY, *Mayor.*

A true copy.

Attest:

J. M. GALVIN, *City Clerk.*

ANNUAL REPORT
OF THE
STREET DEPARTMENT,
FOR THE YEAR 1897.

[DOCUMENT 34 — 1898.]



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PART I.

REPORT OF THE SUPERINTENDENT OF STREETS.

PAGES 1 TO 86.



ANNUAL REPORT
OF THE
STREET DEPARTMENT.
FOR THE YEAR 1897.

HON. JOSIAH QUINCY,

Mayor of the City of Boston :

SIR: In compliance with the Revised Ordinances, the annual report of the operations and expenses of the Street Department for the year 1897 is herewith respectfully submitted.

ORGANIZATION.

The work of the Department during the past year has been carried on under the same organization that was effected when the consolidated department was created in 1891 and as amended in 1895, the several divisions of the department being as follows :

Central Office.	Paving Division.
Boston and Cambridge	Sanitary Division.
Bridges.	Sewer Division.
Bridge Division.	Street-Cleaning Division.
Ferry Division.	Street-Watering Division.

Each of the above divisions, with the exception of the Central Office and the Boston and Cambridge Bridges, is in charge of a Deputy Superintendent.

The Boston and Cambridge Bridges are managed by two commissioners, the Superintendent of Streets being the commissioner for the city of Boston, the other commissioner being appointed by the Mayor of the city of Cambridge.

More extensive study than is given under this résumé of the year's work, with detail of figures and expenditure, will be found in the division reports of the Deputy Superintendents.

APPROPRIATIONS.

The money assigned for Street Department work the past year was made available under the following appropriations:

First. — Maintenance: At the commencement of the financial year, February 1, the department estimates of the amounts necessary for the proper maintenance of the various divisions are submitted to His Honor the Mayor, who makes such recommendation as he may deem proper to the City Council. The appropriations passed for this purpose were as follows:

Central Office	\$20,000 00
Bridge Division	125,000 00
Cambridge and Boston Bridges	14,000 00
Ferry Division	220,000 00
Paving Division	660,000 00
Sanitary Division	460,000 00
Sewer Division	300,000 00
Street-Cleaning Division	310,000 00
Street-Watering Division	70,000 00
Total	\$2,179,000 00

Second. — Special work done under loan appropriations for permanent improvements: There was made available from loan money, \$25,000 for new or reconstruction work in each of the twenty-five wards, or a total of \$625,000 for all.

In addition to the above amount, balances and orders passed during the year for special items amounted as follows:

Bridge Division	\$72,525 14
Ferry Division	8,000 00
Paving Division	386,830 56
Sewer Division	117,234 38
Total	\$584,590 08

Third. — In 1891 an Act was passed by the Legislature, entitled, "An Act Relating to the Location, Laying Out and Construction of Highways in the City of Boston." (Chap. 323.) From this fund new streets and sewers assessable on the abutting property are built. The amount expended the past year was:

Streets	\$178,377 53
Sewers	190,697 93
Total	\$369,075 46

Fourth.—In 1895 an Act was passed by the Legislature and amended in 1898 entitled, “An Act to Provide for the Laying Out and Construction of Certain Highways in the City of Boston” (commonly known as the Boulevard Act). (Chap. 334 of 1895; Chap. 236 of 1898.) The amount expended this year was as follows:

Streets	.	.	.	.	.	.	\$158,074	47
Sewers	.	.	.	.	.	.	46,354	68
Total	.	.	.	.	.	.	\$204,429	15

Fifth.—In 1896 an Act was passed by the Legislature, entitled, "An Act Relative to Stony Brook in the City of Boston." (Chap. 530.) \$500,000. The amount expended this year was \$260,741.16.

Sixth.—In 1895 an Act was passed by the Legislature entitled, “An Act Relative to the Establishment of a New Ferry Landing in the City of Boston.” (Chap. 435.) \$500,000. The amount expended this year was \$42,296.20.

Seventh.—In 1896 an Act was passed by the Legislature, entitled, "An Act to Provide for a Union Station for Passengers on Railroads entering the southerly part of the City of Boston." (Chap. 516.) The amount expended this year was as follows:

Sewers	.	.	.	.	.	.	\$87,984	59
Streets	.	.	.	.	.	.	6,885	28
							\$94,869	87

Eighth.—In 1897 an Act was passed by the Legislature, entitled, "An Act relative to the Sewerage Works of the City of Boston." (Chap. 426.)

From this fund all "Sewerage Works" are built.

The amount expended the past year was \$464,830.00.

Thus the expenditures under the several appropriations of the year 1897 were as follows:

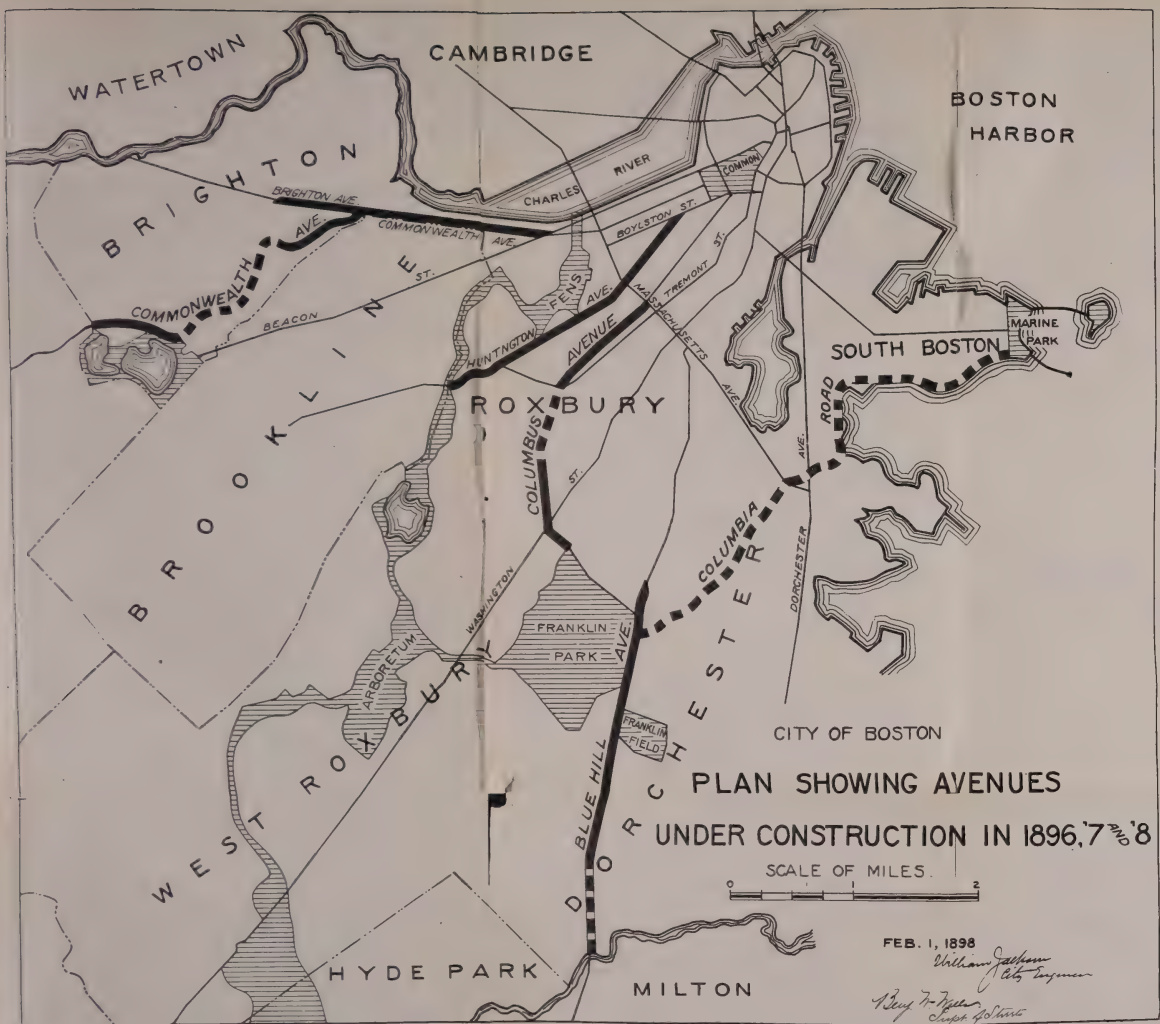
Maintenance	\$2,245,816 68
Street Improvements (by wards) . .	732,597 55
Bridge, specials	39,265 96
<i>Carried forward,</i>	<u>\$3,017,680 19</u>

<i>Brought forward,</i>	\$3,017,680 19
Ferry, specials	5,862 88
Paving, specials	303,097 70
Sewer, specials	114,234 38
Laying Out and Construction of Highways, Blue Hill and Other Avenues (Boulevard Act)	457,323 83
Stony Brook Improvement	116,180 78
New Ferry Landing	260,741 16
South Union Station	42,296 20
Sewerage Works	94,869 87
	464,830 00
Total	\$4,877,116 99

CONSTRUCTION WORK, STREETS AND AVENUES UNDER
"323" AND "BOULEVARD" ACTS.

The following streets and avenues were under construction during the year, and have been wholly or partially completed at an expenditure of \$573,504.61 for both sewer and surface work:

Abbotsford street.	Granby street.
Athelwold street.	Greenbrier street.
Audubon road.	Harvard street.
Bay State road.	Huntington avenue.
Belmore terrace.	Ipswich street.
Belvidere street.	Lauriat avenue.
Bernard street.	Leroy street.
Bloomfield street.	Malvern street.
Blue Hill avenue.	Morse street.
Boylston street.	Norway street.
Brighton avenue.	Oakley street.
Burt street.	Parker street.
Chamberlain street.	Peterborough street.
Chamblet street.	Queensberry street.
Clinton street.	Ruggles street.
Columbia road.	Rosseter street.
Columbus avenue.	Sherborn street.
Commonwealth avenue.	St. Alphonsus street.
Elizabeth street.	St. Stephen street.
Ellet street.	Tonawanda street.
Fairmount street.	Turner street.
Fenelon street.	Vancouver street.
Fullerton street.	Waterlow street.
Gaylord street.	Wilder street.
Geneva avenue.	Wolcott street.





The year 1897-1898 was one of great activity in all the lines of Street Department work. In addition to the construction of many new streets and the reconstruction of an unusual number of old ones, another section of Columbus avenue, from Ritchie street to Washington street, was completed, a considerable amount of work was done on Commonwealth avenue, and a beginning made on the great new boulevard, known as Columbia road, which was planned, laid out, and the order of construction passed, during the current year. The present condition of the new avenues is shown by the accompanying chart. Brighton and Huntington avenues are completed; Commonwealth avenue is built to Warren street, the remainder being still under construction; Blue Hill avenue is completed to Walk Hill street, and the remaining section to Mattapan square will be ordered as soon as the question of the grade crossing of the New England railroad is settled, that now being before the Railroad Commissioners; Columbus avenue will be completed early in the coming year, the only section not built being that between Roxbury crossing and Ritchie street; the new boulevard, Columbia road, will be under construction for the two years to come, but the sections between Blue Hill avenue and Edward Everett square are already fairly under way.

The construction of Columbia road completes the system of boulevards which was commenced with the laying out of Commonwealth avenue in the year 1895. The map herewith shown gives the location of these great avenues, and the complete system of drives and beautiful residential territories, which have been developed, can be seen at a glance. Starting from the city proper, it will be possible to reach almost any of the outlying sections over well-constructed, wide avenues. Columbia road, the latest to be laid out, will perhaps be the most beautiful drive in the city, reaching as it does from Blue Hill avenue to Marine Park, City Point, one roadway being designed as a park road, the other as a traffic road, and the centre space reserved for the electric cars. A portion of this road will follow the shores of Dorchester bay, and the proposed plan will develop one of the most beautiful drives in any city, and convert what is now practically worthless territory into a valuable residential district.

The plan of treating hill streets, the grade of which is so steep as to make them impassable, which was followed in the case of Quincy street, Charlestown, and Ruth street, East Boston, was adopted for Covington street, South Boston, illustrations of which are inserted here. This form of construction seems to be well adapted to streets of this kind.

PAVING DIVISION.

Expenditure.

Maintenance.	Specials.
\$690,187.34	\$1,035,695.25

For expenditures under Laying Out and Construction of Highways, Blue Hill and other avenues, and South Union Station, see pages 2 and 3.

This division has charge of the maintenance and reconstruction of about four hundred and seventy-one (471) miles of streets.

The following shows the amount and kind of reconstruction work done by the Paving Division during the year:

	Sq. Yds.
Granite blocks on concrete base, with pitch-joints .	21,759
Granite blocks on gravel base	191,578
Asphalt	23,215
Macadam. See note.	

NOTE. — A very large portion of the work of the Paving Division is the reconstruction of macadam streets. The amount of this work is best shown by the number of feet of edgestone set up and gutters relaid, which are as follows:

Edgestone set and reset, 243,367 linear feet. Gutters laid and relaid, 70,273 square yards.

The quantity of cracked stone and telford furnished from the city ledges was as follows:

CRACKED STONE, BALLAST OR TELFORD.

Output of Stone from City Crushers.

	Crushed Stone. Tons.	Telford. Tons.
Bleiler's ledge.....	26,636	363
Centre-street crusher.....	20,052	
Chestnut Hill-avenue crusher.....	18,869	
Codman-street ledge.....	18,498	721
Commonwealth-avenue ledge.....	2,547	
Dimock-street crusher.....	37,265	
Kenney-street ledge.....	2,988	
Rosseter-street ledge.....	22,717	3,902
Totals.....	149,572	4,977



WASHINGTON STREET, SHOWING OLD AND NEW PAVEMENT.

The plan of repairing macadam streets with the steam roller by first picking, then lightly coating with stone and rolling in, was continued with success, and the coming season even more of the work will be done in this way, results showing that, at a small expense, macadam roads can be kept in excellent condition if given frequent care and attention. The difficulty at the present time, as it has been in the past, is that the maintenance appropriation is not sufficient to fully and systematically do this work. From the Paving Division maintenance appropriation, aside from the street work, must be taken sums sufficient for the removal of snow, cleaning of streets in the outlying districts, the placing of all signs, the maintenance of the Permit Office, the support of the stables and yards, rebates for stone and brick sidewalks, expense of numbering buildings, and the administration expenses of the Paving Division Office; thus the amount remaining for street repairs is inconsiderable, compared to the amount of work to be done.

The down-town section of the city has received but little attention in the last twenty years. A few main thoroughfares have been substantially repaved; but the great proportion of the streets are paved with the old small blocks on gravel base, and, through the placing underground of wires and other structures, have lost their shape, and are in such condition that constant attention from the force of patch-pavers is necessary.

More strongly than ever should be urged the making available of a sufficient appropriation to reconstruct the streets in the city proper. Boston in the past few years has expended freely in a most progressive way. The system of parks and of boulevards has been developed, and in this regard no city in the country can surpass what has already been accomplished and made possible to be done in the future. It is, however, a matter capable of demonstration that the amount of loss to the teaming interests annually caused by the rough and uneven pavements, to say nothing of the unsightliness and discomfort to the great mass of citizens, reduced to dollars would equal an immense sum of money.

Another aspect of this question is that owners of valuable and high-taxed property in the city proper certainly have the right to ask that the street surfaces in front of their premises shall be well shaped, well drained, and well cleaned. From every point of view the city would be the great gainer by doing the work necessary in the down-town section in a short period of time, rather than continuing the present system of doing a bit here and a bit there, and constantly repairing and

patching; and for this purpose, as has been done by cities in other States, an act should be passed by the Legislature allowing the city of Boston to reconstruct the down-town streets by an appropriation made outside the debt limit, and \$500,000 a year should be allowed for the term, say, of three years.

It must certainly be the wish of the citizens of Boston, that the streets of the city should be well paved and clean.

The press of this city might do a good work, when contrasting New York and Boston street conditions, if they would at the same time point out the causes of difference, namely, that New York has for the past three or four years expended several millions of dollars in substantially resurfacing and rebuilding—largely with asphalt—all the city streets.

It has been the custom for some years past for the City Council to appropriate each year a sum of money for street reconstruction. This money, with the exception of three or four assignments for special work, has been allotted by wards in equal sums, twenty-five wards receiving \$25,000 each without regard to the necessities of the different localities, and the work has been done by the street department under this limitation. This practice is very objectionable, for the reason that every year certain work must be done in some wards which exceeds the amount of \$25,000. This is particularly true in the down-town section where every year a certain amount of block paving and asphaltting should be done. I would recommend as a matter of department economy and for the general good of the city that the coming loan bill be passed as one appropriation, and the distribution and expenditure of the money be placed in the hands of the Superintendent of Streets. Under this arrangement, the most necessary work in all sections of the city could be done, no wards would suffer, and the present unsatisfactory conditions in certain localities might be removed.

Asphalt pavement is well adapted for the street surfacing of a large portion of this city, now macadamized or granite-paved, and the department is in receipt of many requests from individuals and from the City Council for this pavement.

The total amount of sheet asphalt pavement in Boston is 191,682 square yards, or 10.81 miles in length. It is distributed over 108 streets and parts of streets, the largest continuous stretches being on Columbus avenue and Huntington avenue. Of the total amount 112,216 square yards have been laid within five years, and are still under a maintenance guarantee from the contractors. The remainder, 79,466 square yards in area, is maintained in the manner of all other



STATE STREET UNDER CONSTRUCTION, SHOWING GRANITE BLOCK PAVING PITCH JOINTS ON A CONCRETE BASE.

city pavements. Up to the past year, the area maintained by the city was comparatively small; but in 1896 the guarantee expired on 32,050 square yards, and in 1897, on 30,118 square yards, and in 1898, 10,145 square yards more will come under the direct care of the city.

The street-cleaning work now done by the Paving Division, I believe should be transferred to the care of the Street-Cleaning Division, except that done in the semi-annual cleaning of the streets in the spring and fall, when both divisions work together. This matter I will touch on under the general subject of street cleaning.

While the relations of this department with the railroad and other corporations occupying the streets have in most cases been pleasant, and without friction, the companies generally evidencing a desire to do their work properly, at the same time, with the best intentions on the part of the companies and the most careful supervision that can be given by this department, there must be a certain deterioration in the street surfaces caused by their work; and I believe that it would be but fair and proper that some system be adopted whereby this loss might be made good to the city by those companies occupying the streets. This might be done either in the form of a percentage tax on the receipts of the companies, or a fixed charge of so much for their trench openings, the price to be based upon the depth and width of trench and kind of pavement. The ordinance requiring a bond to be filed by each company guaranteeing its work for six months should be amended by extending the time to twelve months, as all the work done in the late summer, expires in the winter season, when it is impossible to make proper examination or to do proper work.

The most notable work done by this division the past year was as follows, viz.:

Blue Hill avenue boulevard completed to Walk Hill street and Columbus avenue between West Walnut park and Ritchie street.

Columbia road sub-graded between Blue Hill avenue and the New England railroad.

These streets have been paved with large granite blocks with pitch joints on concrete base, viz.:

Bulfinch street, Congress street between State street and Exchange street, North street between Merchants row and Union street, State street between Washington and Commercial streets, Washington street between Kneeland street and a point 200 feet south of Dover street, and Winthrop square.

These streets have been paved with large granite blocks with pitch joints on a gravel base, viz.:

Charles street between Cambridge street and Leverett street, Washington street, 200 feet south of Dover to Waltham street, and Water street between Washington street and Devonshire street.

These streets have been paved with large granite blocks, gravel joints on a gravel base, viz.:

Dudley street, between Brook avenue and Upham's corner, Main street, from Miller street across Mead street and Tremont street from Columbus avenue to Sarsfield street.

Work has been in progress on twenty-one streets under the "323" Act, eight of which have been completed.

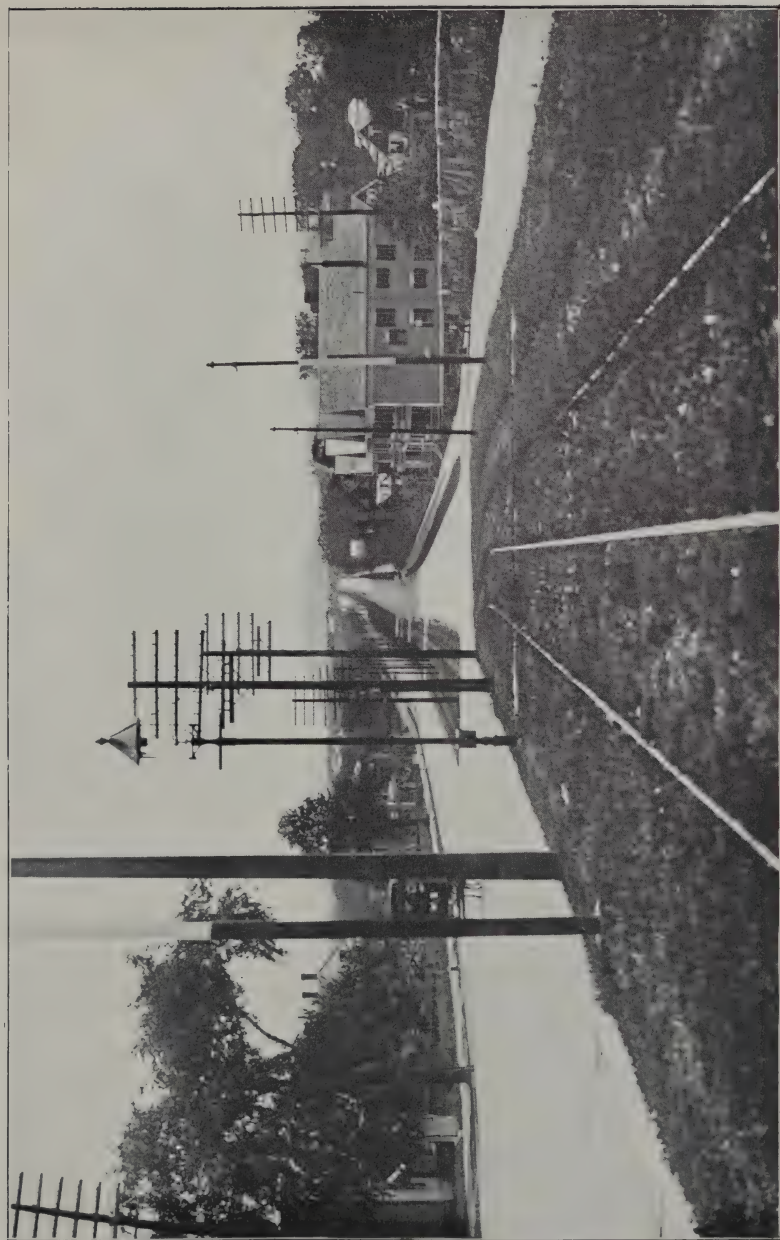
SEWER DIVISION.

Expenditures.

Maintenance.	Construction.
\$295,522.25	\$839,805.54

For expenditures under Laying Out and Construction of Highways, Blue Hill and other avenues, and South Union Station, see pages 2 and 3.

The work and organization of the Sewer Division has very greatly increased during the past year, this being made possible by the passage of legislation (Chapter 426 of the Acts of 1897) giving the city of Boston the right to borrow annually \$1,000,000 for the construction of sewerage works, these works to be assessed on all estates benefited. The act also provided that a rental charge should be made for the use of sewers of a sum equal to the amount required for their maintenance and care. In former years it has been necessary for the City Council to pass in detail, appropriations for sewers, and as a result many great improvements which have been needed for years have been neglected owing to the difficulty of securing sufficient appropriations. Under the new act, this is done away with, and the most necessary work has been undertaken at once. The expenditures under the new act for construction for the first few years will be very considerable, but at the end of that time many of the large pieces of construction work will be accomplished, and the amount required will become less from year to year. The problem



BLUE HILL AVENUE BOULEVARD, SHOWING GREAT BLUE HILL IN THE DISTANCE.

of surface drainage, which has so long troubled the department, is also solved by this legislation, and the most important brook channels have been taken in hand, and the work already commenced. A general study of the sewerage system of the entire city is being made, and the development henceforth will be on established and scientific lines, instead of following what has been the custom in the past—to construct, not according to the needs, perhaps of the near future, but as allowed by the limitations of the appropriation.

A great amount of work which has been done in recent years for the necessary relief of certain territories has not been designed to meet or connect with the future developments of sewers, and in many cases this has brought up a very serious problem of rebuilding sewers of quite recent construction.

Already much has been accomplished which gives very great relief to certain sections where the sewers were badly overcrowded, and the overflows of insufficient size, or the condition so bad as to cause a back-up in time of rainfall. Under this new act, I believe it safe to predict that in a few years no city in the country will be better sewered than the city of Boston; and in no city will it be more easy for the citizen to secure new sewers where needed or relief from improper conditions.

Following is the full text of the new act, under which, as stated above, the work of the Sewer Division is now conducted:

[CHAPTER 426.]

AN ACT RELATIVE TO THE SEWERAGE WORKS OF
THE CITY OF BOSTON.

Be it enacted, etc., as follows:

SECTION 1. The city council of the city of Boston shall annually appropriate, to be met by the issue of bonds as hereinafter provided, sums not exceeding one million dollars in any one year, for constructing sewerage works in said city, and shall also appropriate, to be met by the annual charges hereinafter provided for, such sums as the mayor of said city shall deem sufficient for maintaining and operating the sewerage works, and such sums as the city treasurer of said city shall each year determine to be the amount to be used for the sinking funds for bonds issued for sewerage works, which, with all other amounts so used and their accumulations, will pay all such bonds at maturity; and there shall also be used for said sinking funds all premiums received from the sale of said bonds, and all amounts received for breach of any contract for constructing sewerage works, or for securities deposited as security for making such contracts and declared to be forfeited to the city, or for sales of property. All sewers, drains, pumping stations and other works

for the collection or disposal of sewage, or surface or ground water in said city, shall be included in the term "sewerage work," as used in this act, and no such work shall hereafter be constructed in said city, except under authority of this act, unless the same has been ordered to be constructed before the passage thereof.

SECT. 2. The board of street commissioners of said city from time to time, with the approval of the mayor, may order that sewers or drains be constructed in said city; that streams or water courses within the limits of said city be filled up or diverted from their original channels; that any such channel or any new channel be widened, deepened, paved or covered; that closed or open sewers or conduits be constructed for the drainage of lands, or that any part of any such stream or water course be so treated, or that any one or more of such things be done.

SECT. 3. Said board may take for said city by purchase or otherwise any lands in fee, and any rights or easements in lands, sewers, water courses and ways, which said board may deem necessary for sewerage works, and in order to take any such lands, water courses, rights or easements other than by purchase, said board, or a majority thereof, shall sign and cause to be recorded in the registry of deeds for the county of Suffolk, a statement that the same are taken for sewerage works, describing the same as certainly as is required in a common conveyance of land, and the lands, water courses, rights or easements so described shall upon such recording become the property of said city.

SECT. 4. The Superintendent of streets or such other officer as the mayor of said city shall from time to time direct shall carry out such order, and may at the expense of said city construct and maintain such work under or over any water course or private land, railroad or public way, in such manner as not to unnecessarily obstruct or impede public travel, and may alter or change the location or grade of any public way in which any such work is constructed, may alter or change the course of any water course, and in general may do any other act or thing deemed by him to be necessary in constructing or maintaining such work.

SECT. 5. Said city shall pay all damages sustained by the owner of any land, water course, right or easement taken by said board, or injured in any manner, or by any person, in doing any act or thing under section four of this act, the same to be agreed upon by said board with the approval of the mayor and said owner, and if they cannot agree the damages shall, on the petition of said owner or mayor, be determined by a jury of the superior court for the county of Middlesex in the manner provided by law with respect to lands taken for highways in said city of Boston, and costs shall be taxed and execution issued in favor of the prevailing party, as in civil cases. Any person whose water rights are thus taken or injured may apply as aforesaid within three years from the time of such taking or injury, and not afterwards.

SECT. 6. The treasurer of said city, to meet the expenses incurred in constructing any sewerage works heretofore or hereafter ordered to be constructed in said city, shall from time to time on the request of said board, approved by the mayor, issue to the total amount appropriated, but not exceeding one million dollars in any one year, bonds of said city, registered or coupon, as said treasurer shall from time to time determine, and the same shall not be considered in determining the limit of indebtedness of said city; said bonds shall

have printed on the face thereof the words Sewerage Loan, shall be countersigned by the mayor and be made payable in terms of thirty years from their date; and shall bear such rates of interest not exceeding four per cent. per annum, payable semi-annually on the first day of January and the first day of July of each year, and be issued and disposed of in such amounts, in such modes, and at such times and prices, as said treasurer with the approval of the mayor shall from time to time determine.

SECT. 7. The board of street commissioners, with the approval of the mayor, shall annually before the first day of July determine just and equitable sewerage charges to be paid by estates in said city for the construction, maintenance and operation of the sewerage works, taking into consideration in determining the charges the necessity of the works as caused by each estate, the amount of use thereof, if any, by the estate or its occupants, the benefit received therefrom by the estate, the amount of any assessment for a sewer paid by any owner of the estate, the length of time which has elapsed since such payment, and the use, if any, that has heretofore been made of the sewerage works by the occupants of the estate, and such other matters as they shall deem just and proper. The determination of such charges as aforesaid shall be final in all cases, and the amount thereof as determined for each estate shall be a lien thereon until paid, and said board shall notify the board of assessors of said city of the amount thereof forthwith after it has been determined, and the same shall be included in the next tax bill on the estate transmitted by said board to the collector, or in a tax bill therefor if no other tax bill is issued for such estate, and be collected as a part of the taxes on the estate.

SECT. 8. All sewers and connections ordered to be made in constructing any way under the authority of chapter three hundred and twenty-three of the acts of the year eighteen hundred and ninety-one, and of acts in amendment thereof or in addition thereto, shall be deemed to be constructed under the authority of this act, and the expenses therefor shall not be considered in determining the assessable cost of work, to be assessed under the authority of said acts.

SECT. 9. No person shall destroy or injure any sewerage work of said city, or without lawful authority therefor pollute or place or maintain any obstruction in any natural watercourse therein; and whoever violates any provision of this section shall for each offence be punished by a fine not exceeding one thousand dollars or by imprisonment in the house of correction not exceeding six months, or by both such fine and imprisonment.

SECT. 10. The supreme judicial court and any justice thereof, and the superior court and any justice thereof, shall have jurisdiction in equity, on the complaint of said city by its attorney, to enforce the provisions of this act and to prevent any violation thereof.
[Approved May 22, 1897.]

STONY BROOK.

The work of connecting the Commissioners' channel at the inlet chamber, near Pynchon street, with the portion of the same channel built by the New York, New Haven and Hartford Railroad Company, has been completed this year, so that the Commissioners' channel is now built continuously from the

Back Bay Fens to Boylston station, with the exception of a small section near the site of the inlet chamber which is still open and uncompleted, pending the settlement of the claims of the Boston Belting Company. When the terms of this settlement are made, this piece will be completed either by building a channel of uniform size through the inlet chamber, or by putting in some form of gates or weir at this point.

During the coming year surveys are to be made to determine the line of the extension of this covered channel to the Hyde Park line. If possible a shorter and straighter line lying, mostly in the public streets, will be selected.

Next winter the city should petition the Legislature for permission to make a loan outside the debt limit, for the purpose of extending this channel as far as Forest Hills. The channel will be built as a covered conduit, as it lies through a thickly settled part of the city where an open channel is very objectionable.

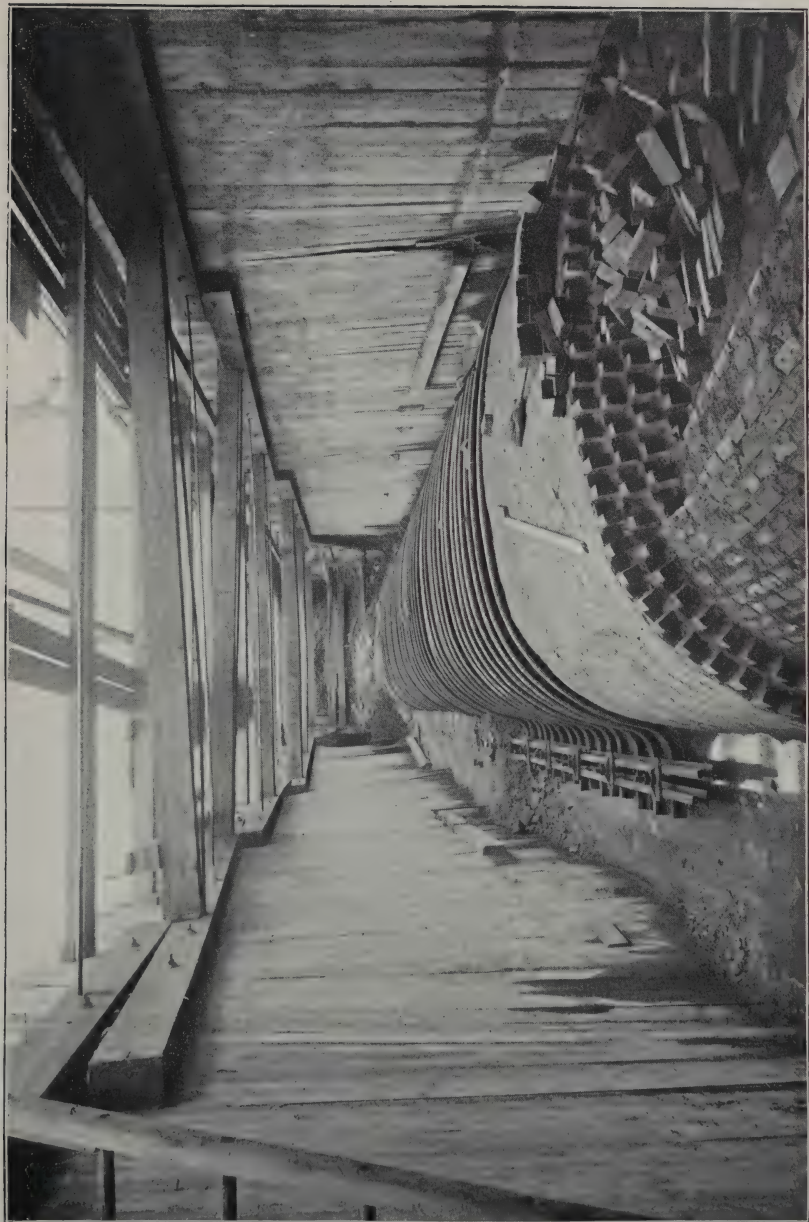
SURFACE DRAINAGE.

Under the provisions of the Sewerage Act, chapter 426, of the Acts of 1897, takings are to be made of all the brooks and natural water-courses of the city, and during the coming year extensive improvements will be carried out. Work has already been started upon Tenean brook which, when completed, will relieve the Lonsdale and Templeton streets district, the Geneva-avenue district and the district around the so-called "Clay Pits," and will also relieve the overcrowded sewer in the vicinity of Gibson and Park streets, where at present, in time of heavy rainfall, the manhole covers are forced some feet into the air, and the streets and fields flooded.

CANAL-STREET SYSTEM.

A very important and necessary piece of work, commenced last year, with a partial appropriation made by the City Government under the law then in force, was the construction of the Canal-street relief sewer. This was carried last year from the interceptor on Atlantic avenue through Central street, India street and a portion of Commercial street. This will be continued the coming year, and probably completed to the connection of the Canal-street sewer, near Causeway street.

The route of this sewer, was originally projected through Clinton and Blackstone streets and Haymarket square.



KNEELAND STREET SEWER SHOWING DEPRESSED SECTION UNDER SOUTH TERMINAL STATION SUBWAY.

On account of the fact that if the Boston Transit Commission should determine to build a subway in Hanover street, the grade of this subway would be so low that it would be necessary to siphon the sewer; the route was changed to go from Clinton street, through Fulton and Cross streets, to Haymarket square, for the reason that, at the point where Cross street crosses Hanover street, the proposed grade of the subway is high enough to allow the sewer to be carried under it without siphoning.

Sewers have also been built in Atlantic avenue, by which the pollution has been removed from the Mercantile wharf and adjacent docks, and in Charles and Allen streets, relieving the condition of the sewer system in Brighton and Allen streets, and also in South Market street and many other small streets.

The Boston Transit Commission, in connection with other work, has rebuilt sewers in Adams square, Beacon and School streets, Cornhill, Hanover street, Tremont street and Tremont row, and Washington street.

The building of the South Union station has resulted in a general remodelling of the sewer system in that part of the city. The sewers in Beach, East, Essex and Summer streets have been combined and carried out, and a new outlet sewer built in Summer-street extension.

About 700 feet of the interceptor in Cove street has been rebuilt and carried out around the head-house of the station, and a very large sewer built from Cove street, across the railroad land, a short distance north of Mt. Washington avenue, which is designed to take the sewage of Kneeland and Harvard streets district. On account of the low grade at which the railroad subway is designed across Mt. Washington avenue, this sewer had to be very much depressed, the crown of the sewer being at Grade 3; and as there was not sufficient weight of material over the sewer to resist tidal pressure, a particular form of construction was adopted, the arch of the sewer being held down by bent rails, and carried over the sewer, and bolted down on each side of the sewer to the pile caps underneath, as shown in accompanying cut.

The most important work which is contemplated for the coming year in the city proper is the completion of the Terminal sewers above mentioned, and continuing the large sewer under the railroad yard up Kneeland and South streets, from the interceptor to Harvard-street sewer, and the completion of the Canal-street sewer.

A district regulator will also be built on the interceptor, near Summer street, and a regulator in Kneeland street, near

Cove street, connecting with the interceptor by a small brick sewer in Kneeland street. At the request of the Terminal Company, a portion of the intercepting sewer, near the location of the gas-holders at Federal-street bridge, will be rebuilt at its expense, in order to enable the city to abandon the portion of the existing interceptor which crosses under the proposed location of the Terminal Company's subway at this point. The house sewer will be built in the new Dorchester avenue, between Summer street and Mt. Washington avenue. The North Market-street sewer needs to be rebuilt; also, sewers in India, Milk and adjoining streets, which are in bad condition.

In Commercial street, near Clark street, the sewer system is excessively old and leaky, and must be remodelled, and probably entirely rebuilt, as the tide rises and falls freely in these sewers at the present time.

In Charlestown and East Boston, the work on the connections of the North Metropolitan sewer will be continued and completed the following year. This will mean for these localities a great relief from the former unpleasant and unhealthy disposition of the sewage on the flats.

A large amount of sewer work is required in West Roxbury, and the coming year will be an active one in that locality. Owing to the completion of the Neponset Valley Metropolitan sewer through this territory, many sewers can now be built which before were not possible; and large areas, which for a long time have been partially developed, can now be made available for residence.

The abolition of grade crossings at Roslindale and Spring-street stations will necessitate some changes in the surface drainage at these points, and will allow the proper development of the sewer system for the Hewlett-street district, which has been held back on account of these proposed changes.

A very unusual amount of sewer work has been completed in Dorchester the past year; and, in addition to the great number of small sewers, might be mentioned the Rosemont and Mill-streets main sewer, which will be carried on in connection with the building of the covered channel for the southern branch of Tenean brook.

The completion of the Columbia-road boulevard will require a large amount of sewer work to be done in that section the coming season, which has already been commenced. A new sewer system will also be constructed for the northern half of Savin Hill, including the portion of Savin Hill avenue between the railroad and Grampian way.

In addition to the considerable amount of ordinary sewer work in South Boston, there has been completed the past year the B and Seventh-streets overflow, and also the sewer in Dorchester avenue between B and D streets. Included in the work remaining to be done in this section are the B-street and Kemp-street outlets.

About 2,100 feet of the West Roxbury low level sewer has been completed this year. The building of the sewer system in Columbus avenue, between Roxbury crossing and Dimock street, is in progress. The relief sewer for the Notre Dame-street district is well under way, and will be completed in another year. This will relieve this section, which has suffered for many years from floods and surface water. The Dorchester-brook sewer has been extended from Norfolk avenue to Clifton street. The long-needed rebuilding of Harrison-avenue main sewer has been nearly completed this year, and this will enable the city to correct the sewer system of the adjacent territory. A considerable amount of new work has been done in the new territory south of Massachusetts avenue, and adjoining the park. There is still under consideration the building of house sewers to relieve from sewage the old Stony-brook channel between Huntington avenue and Elmwood street. This old channel should be rebuilt, and a general system of sewerage for that district introduced. As this involves a very large expenditure, the matter has been held in abeyance until other more important work is accomplished. This matter will be given careful study the coming year.

Muddy-river conduit in Brookline avenue should also be repaired, and a considerable portion of it rebuilt. This also is a very extensive work.

A considerable amount of work has been accomplished in Brighton. The coming year a large number of petitions for house sewers will receive attention, and the matter of surface drainage of this territory will be taken in hand.

There has been considerable complaint from residents in the neighborhood of the Back Bay Fens regarding sewage deposits. It is claimed, and justly so, that the Stony brook water is contaminated with sewage, and that the settlement of the past twelve years, since the Fens were constructed, has resulted in a very large amount of objectionable deposits. There is but one way to overcome this difficulty, and that is to extend the Stony brook channel to Charles river. This would cost a very considerable amount of money, and the first portion to be undertaken would be the reconstruction of about 4,500 feet of the old Stony brook

channel, at an estimated cost of about \$250,000. Ultimately the new channels of Stony brook should be extended to the Charles river.

It is important that the Fens should be cleaned, and the existing deposits of sewage removed. I would recommend that an appropriation be made for this purpose, and this would undoubtedly for some time to come remove any serious objections. It is estimated that this would require the sum of \$25,000.

In the last annual report a brief account was given of the controversy between the Metropolitan Sewerage Commission and the city of Boston, and the matter was followed up during the past year. Finally, an agreement was arrived at, and a contract drawn for five years, from 1896 to 1900, inclusive, by which, the amount the Metropolitan Sewerage Commission will pay the city of Boston for the rental of its sewer system is defined. As a matter of record, a copy of this contract will be found in the Sewer Appendix, page 251.

Upon the execution of this agreement, the department proceeded with the work of enlarging the sewage storage reservoirs at Moon Island, a contract was let, and work has been begun. The result of this construction will be the doubling of the capacity of the reservoirs, and it is expected that they will prove sufficient for all requirements likely to be made until the year 1905. If at this time the volume of sewage becomes so great as to overtax the reservoirs, further extensions will have to be made, for which there is ample room on the island.

At the same time, the pumping plant at the Calf Pasture has been thoroughly overhauled, and its capacity increased. A contract has been made for designing a new 72,000,000-gallon sewage-pump, which is to be set upon a foundation built for that purpose when the original plant was put in. The design for this pump will be completed during the coming year, and a contract let for its construction, it is expected, during the succeeding year.

SANITARY DIVISION.

Expenditures.

\$492,670.56

The past year the collections of this division were as follows: 353,725 loads, 54 cubic feet each, of house dirt and

ashes ; 56,783 loads of house offal, showing a very considerable increase in the amount of material removed.

No special money being provided for this division, it has been necessary to use the maintenance appropriation for the purchase of certain supplies which were not estimated when the appropriation was made ; and, in the interest of safety, it was necessary to expend a considerable sum on the Fort Hill wharf.

The dumping scows also have required a considerable expenditure in docking and repairs.

A contract has been made with the New England Sanitary Product Company to receive the offal at various dumping points, and remove the same to a plant to be constructed by them at the Cow Pasture. This will do away with the very objectionable practice of dumping this material at sea. The contract and plans require that a plant shall be erected by the contracting company, substantial in every way, and thoroughly adapted to the purposes for which it is to be used, and it is expected that on completion the most perfect plant of its kind in this country will be in operation.

Before the end of another financial year, it is my hope to also report a plant in operation for the disposal of the combustible waste. This matter has received careful attention, but it has not been possible as yet to bring about the improvement. I feel confident, however, that the coming year this matter will be taken care of. It will then be only necessary for the city to dispose of its solid ash collection, and, as this is clean material, there is no objection to either dumping at sea or depositing on vacant land. The entire matter of the disposition of the waste products of the city will then be handled in a proper and sanitary manner.

As the garbage must now be handled for final disposition, separately from the ashes, it will be necessary to reconstruct Fort Hill wharf, so as to allow two scows to dock at the same time, there now being but one berth.

The steel carts put in service last year have proved satisfactory, and I would recommend the gradual displacement of the old form of wooden cart by new steel dumping carts.

STREET CLEANING DIVISION.

Expenditure.
\$309,993.38

Cleaned 13,261 miles of streets; removed 121,768 loads of dirt.

The work of this division has been carried on substantially on the old lines, with the exception of such slight extension of the patrol service as the appropriation would allow. The work of this division is greatly increased, and the results made less satisfactory, from the fact that so large a portion of the down-town streets are old and in poor condition. On streets newly constructed with modern paving — either asphalt or granite blocks with pitch joints — it is a comparatively easy task to keep the pavements clean; and on all such streets the patrol system is largely used, and as a result these streets are always clean and show up handsomely. There is, however, but a very small proportion of the down-town area that has been repaved for many years.

It is desirable that street-cleaning districts be established in the sections of the city which are now covered in this work by the Paving Division. Under the present plan, as a matter of economy, it has been the practice for the Paving Division to do the street cleaning in the sections where, at the time of this arrangement, there was little or no paving; and also in East Boston. I would recommend that a street-cleaning force be established in East Boston, Dorchester and Brighton. No stable accommodations being available, and the appropriation not being of sufficient size to warrant, this plan has not been carried out. The street-cleaning forces, however, have been sent for the first time, as often as arrangements could be made, to Brighton and Dorchester. East Boston is cared for by the men of the Charlestown District.

By the purchase of wharf property in East Boston in 1897, it is now possible, if an appropriation can be obtained, to make suitable quarters for the establishment of both Street-Cleaning and Sanitary Districts in that section of the city. In Dorchester, there is available for this purpose the buildings on Gibson street, excellently located, and to be secured at a low cost.

A special appropriation should be made for the removal of snow; it would then be possible to estimate with some accuracy the amount required for doing the work of the year on a certain basis.

A more rigid enforcement of the ordinances in relation to the throwing of waste materials into the streets would greatly assist the department in setting a higher standard of cleanliness.

BRIDGE DIVISION.

Maintenance.

Expenditure.

\$126,529.32

Special.

Expenditure.

\$39,265.96

The City Council has greatly neglected this division in the matter of appropriations. Until within the past two years an appropriation has been made for the reconstruction of certain old bridges which were badly out of repair, and the maintenance appropriation has never been considered to be made for the purpose of doing new work. The care of the 128 bridges and the payment of draw-tenders and other employees and necessary repair stock and supplies is all that is contemplated when the maintenance appropriation is made.

No special money was voted last year, and only by great effort was a small amount transferred, which made possible some slight reconstruction work on Congress-street bridge, whereby it was made safe. Several of the most important bridges of the city, where the travel is greatly increased are in such a condition that immediate action should be taken. Substantially new bridges are required at Congress street, Mount Washington avenue and Malden, and other bridges are in need of considerable reconstruction.

FERRY DIVISION.

Maintenance.

Expenditure.

\$219,983.24

Specials.

Expenditure.

\$5,862.88

Receipts.

\$171,449.21

For expenditure under the New Ferry Landing see page 3.

During the past year addition has been made to the electric motors for assisting teams up the drops. These have worked well, and have made possible a better running time of the boats. Three boats have been equipped with electric lights, now making five boats so provided. Contract has been let for the building of a new ferry-boat, the completion of which is called for by May 1, 1898. Another boat will be immediately contracted for as soon as this one is in service, and found to be satisfactory.

One new drop and tank have been constructed and put in place at the South Ferry, East Boston side, and the City Engineer recommends that two more be built and placed in position. When this is done, all the drops will be practically new. Plans and specifications have been prepared for a new head-house and the re-arrangement of slips at the South Ferry, East Boston side. There is some question as to the land-takings, which may delay the prosecution of this work.

The "East Boston" and "Hugh O'Brien" have been hauled on the railway, calked and metaled during the past year. The boats are now in good condition with the exception of the old "Winthrop," which cannot possibly be made to do service more than one or two more years.

STREET WATERING DIVISION.

Expenditure.

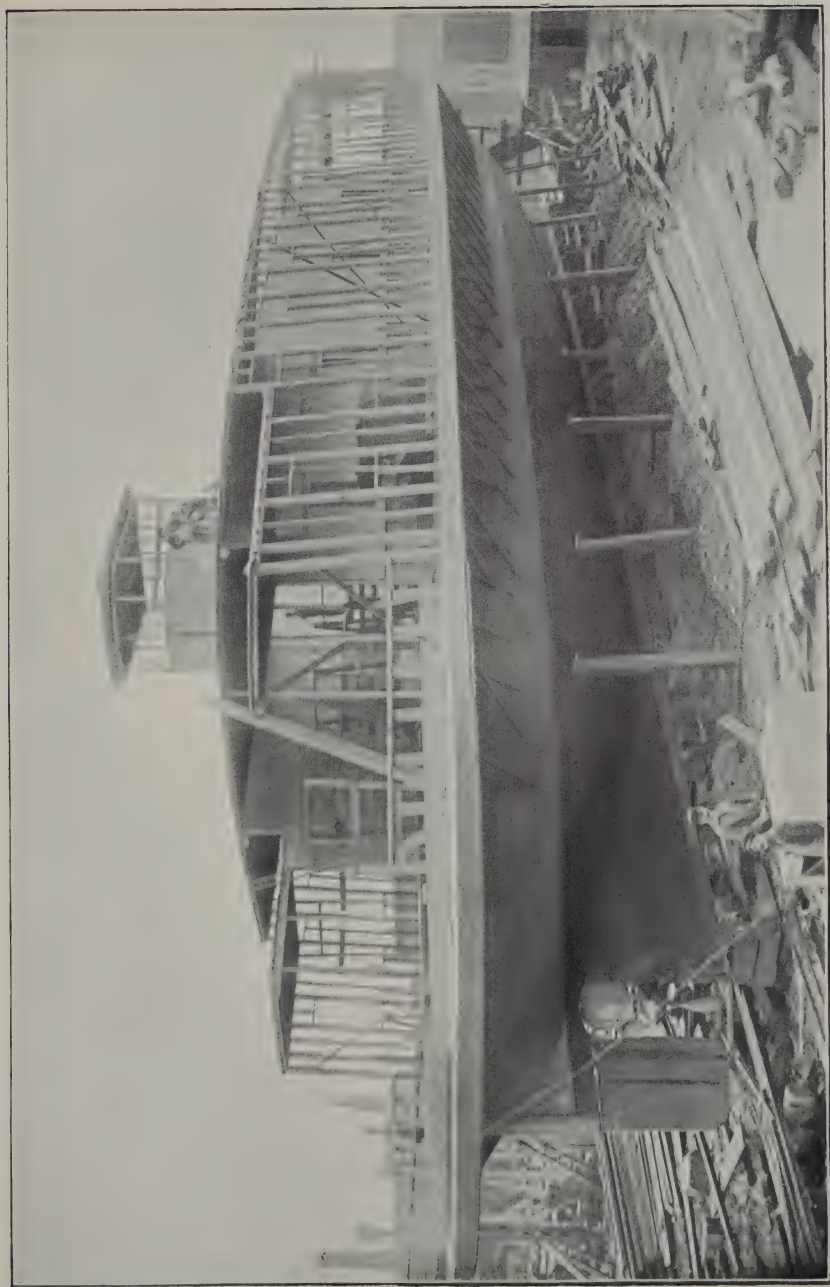
\$78,736.72

Not including water-bills of

\$76,930.40

The season of 1897 was a very difficult one, unusual weather prevailing until late in the fall, making it necessary to extend the street watering season. The increase in expenditure over last year of about \$7,500 was made necessary by this lengthening of the season.

To properly cover the work of street watering, a larger appropriation should be made available; and I would recommend that for the coming year the watering of all the city streets be placed under the supervision of this department, and advantage be taken of the Act passed by the Legislature of 1897, authorizing this work to be done and the cost assessed on the owners of the abutting estates. At the present time the city undertakes the care of macadam streets only, and the watering of paved streets is done by subscrip-



FERRY-BOAT "GOV. RUSSELL," SHOWING CONSTRUCTION.

tion to private contractors; thus the burden bears unfairly, and the results are not satisfactory. In certain sections of the city, particularly in the poorer quarter, where the streets are paved, no watering is done for the reason that the people are not able to pay, or their great numbers make it difficult for arrangements to be made for the work by individual efforts.

Under the Assessment Act the cost of street watering would be assessed on the property, and the amount would be so small that it could hardly be felt as a hardship. Studies are being made along this line, and it is probable that the City Council will be asked to authorize the department to undertake the street watering under the Assessment Act.

As mentioned in my last report, it was expected that a thorough trial would be given the electric watering car service. The matter, however, was blocked by the management of the West End Street Railway Company, and the experiment still remains untried. Under present conditions, however, I anticipate no trouble of this sort the coming season, and the subject will be thoroughly gone into.

PURCHASE OF SUPPLIES.

The same careful attention has been given through the purchasing agent to the purchase of supplies for the department. The establishment of a Central Supply Department and stock-room has made it possible to take advantage of the market, and the matter of distribution and checking of supplies has been given more attention, with good results.

STABLES AND BUILDINGS.

The condition of the buildings occupied by the Street Department for stables and other purposes is such that a very considerable amount of money could be expended to advantage, and with an ultimate saving to the city. As far as the maintenance appropriation would allow, repairs, painting and additions have been made; but these have necessarily been quite limited. In the west yard, on North Grove street, there is ample room for the care of a much larger force. The buildings at this yard are, with one exception, old, badly arranged, and so situated as to cover the ground with the least economy of space. Could an appropriation be made, it would be possible to re-arrange this yard, so that all the horses and teams required for service in that district, by the Street-Cleaning, Sanitary and Sewer Divisions, could be provided for. What is true of this yard applies to many others.

In West Roxbury, the Paving Division stable is in such condition that it is hardly worth while to repair; and yet, in its present shape, it is almost untenable.

A hospital for sick horses is greatly needed. I trust the comparatively small amount of money needed for this purpose will be made available next year.

An additional number of at least fifty horses could be employed with economy and advantage to the general work of the department. Stable accommodations, however, are such that it is necessary to depend on hired teams.

SMOKE NUISANCE.

Under the provision of the statute relative to the abatement of the smoke nuisance in the city of Boston, this work has been authoritatively assigned by the Mayor to this department for some years. This includes careful inspection of all boiler plants and the examination of all plants in the matter of smoke nuisance. No boiler permits are granted by the Building Commissioner without first receiving the approval of this department; and before this department consent to these permits, the applicant must make satisfactory representation as to the proper equipment of the plant, so that no smoke nuisance will arise.

Although it is a somewhat difficult matter to handle, the results of the work of this department in this city have been quite satisfactory. One inspector and two assistants devote their entire time to this subject.

COMPLAINTS.

Much attention has been given by the present administration to the treatment of complaints and requests received at this office, and a system has been developed during the past year which it is believed is producing excellent results. In past years there appears to have been no uniform method of dealing with complaints, each having been treated as an individual case. In some cases a memorandum was sent to the proper official, in others a formal letter, and sometimes the original complaint. In any case there was no regular system of obtaining reports or recording the results of such investigation as was made, and no assurance was given to the Superintendent that the causes of dissatisfaction were removed or explained.

Under the present system, on receipt of a complaint, it is immediately stamped with a number (these numbers being consecutive), a reference to the proper official of the depart-

ment, and a brief statement of what action or information is desired. An entry is then made on a day book kept for the purpose, giving the name of the complainant, number of complaint, official to whom referred, and memorandum of the subject and of the directions given by this office. Thus, in a very few minutes from the time of its receipt, the document is on its way to the proper official to receive such attention as may be required.

Each complaint so forwarded is required to be returned to the Central Office, with a report stating what action has been taken, and giving such information as is necessary to a full understanding of the case. To avoid any risk of complaints being overlooked in the several divisions of the department, each complaint on being returned is checked off in the day book, and each week a list, by numbers, is sent to the different divisions of any complaints forwarded during the preceding week and not yet returned. Upon the receipt of such notice the official in charge is required either to return the documents with explanation of the delay, or to report what progress has been made, and what further action is proposed.

Upon receipt of any complaint, suitable acknowledgment is made to the writer. If the cause of complaint is such that there must necessarily be some delay, or if there are any special circumstances to be explained, a letter is written; but if the matter relates to some fault in the service or to some minor defect in a street or in some of the structures under the care of the department, a printed form on a double postal card is filled in and sent. This consists of a statement (signed by the Superintendent), that the communication has been received and referred to the proper division for action or report, with the number and date of the complaint. The reply card attached is addressed to the Superintendent of Streets, and contains a printed acknowledgment that the matter has been satisfactorily attended to, with number and subject of complaint and date of receipt, and blanks for date of reply and signature of complainant.

At the bottom of this reply card is left a space for any comment which the writer may desire to make, and this can be used, if desired, for forwarding a second complaint if the former one has not been attended to in a satisfactory manner. When a reply card containing such further complaint is received, it is compared with the report (if already on file), and forwarded to the same division to which the original complaint was sent, and a record made on the day book. The number on the card and on the original complaint being

the same, it is very easy to trace the responsibility for any delay which may have occurred.

Of the acknowledgment cards sent out from this office, letter-press copies are taken, making practically as good a record in the letter books as though a letter had been written and sent, and at a great saving of time. It will be noted that by the use of these reply cards the acknowledgment of satisfactory service by the complainant only requires the insertion of the date, and the signature of the writer—the card, as already stated, being addressed, ready for mailing.

The daily record of complaints, in which the numbers appear consecutively, is indexed each day alphabetically under the names of the complainants. When the complaints are finally returned to this office, they are pasted in file books in the order of their numbers, the reply cards being attached to the complaints to which they relate, and fully indexed by giving the names of the writers and the subjects of complaint. It is thus easy to turn back to former complaints on any particular subject or from any particular correspondent.

By this system, it is believed that the essential conditions of good service are fulfilled, and at a comparatively small expenditure of time and labor. It insures the immediate transmission of the complaint to the executive officer in charge, and his prompt action and report; it gives the correspondent the assurance that his complaint is receiving attention, enables him with very little trouble to acknowledge satisfactory service, and gives him an opportunity to make further criticism if he desires; and finally, it brings all the facts in the case before the superintendent in such a manner that he can readily forward to the complainant an explanation of any circumstances in regard to which it is desirable that he should be informed.

It may not be out of place to say that the department not only admits the right of every citizen to make reasonable complaint, but fully recognizes the fact that intelligent and friendly criticism is a most valuable aid to good service, amounting as it does to a system of volunteer inspection, and supplementing the regular inspection service of the department. The public has shown itself to be very willing to co-operate with the department in carrying out the details of this system. When the return postal cards were introduced, while it was believed that a large proportion would be returned, it was feared that many would be neglected or forgotten; but the result has exceeded expectation, the number not returned having proved a very small one. Moreover, the great majority of complainants, finding themselves met in



ONE OF THE IMPROVED STREET SIGNS, STYLE No. 11.

a spirit of fairness and with a desire to do what is possible for their relief, have proved to be reasonable in their demands, and anxious only for efficient service and the good of the public; and I wish to take this opportunity to express my gratitude to the many good citizens who have given the department their co-operation and support in its efforts to improve the service and adapt it to the needs of the community.

SIGNS.

Greater and more systematic attention has been given this year to the placing of street signs. New and more attractive styles of double-faced post signs have been devised and adopted. While this may seem a comparatively unimportant matter, the many favorable comments made by citizens to the department show that this improvement has been appreciated.

The signs placed by this department are made by the Sanitary Division, but the work of locating is under the supervision and direction of, and the expenditure charged to the Paving Division.

BOSTON AND CAMBRIDGE BRIDGES.

No work of importance has been undertaken the past year on these bridges. The utmost care, however, has been necessary to keep them safe under the limited appropriation, and in good condition for the immense travel.

I must again express my appreciation of the services of my associate, Mr. William J. Marvin, of Cambridge, upon whom the detail of the work has largely fallen.

The matter of a new bridge to Cambridge, as recommended in the last report of this department, is before the present Legislature, with an excellent prospect of legislation being passed which will make possible the construction of a new and adequate bridge.

Craigie Bridge.

A new sidewalk has been built on the south side of the bridge for the whole length of the Cambridge end, a new roadway has been laid for the same distance between the sidewalk and the track, one hundred and twenty-five feet of new sidewalk has been built on the north side at the Boston end, and new timbers were put under the draw to hold it in place. The work was done at night so as not to stop travel.

The pavement on the north side of the bridge for its whole length has been repaired, and the following repairs have been made on the draw-tender's house: New gutters on piazza, new tinning on ell, two chimneys re-topped, two coats of paint put on house. The engine-house and iron on pier, and the new fence have been painted, and two chimneys re-topped on the house at the Cambridge end of bridge.

The bridge is swept once a week, always after midnight, and the roadway is watered with salt water three times daily when necessary to lay the dust. The ordinary repairs, and sweeping sidewalks and piers have been done by the draw-tender and assistants; draw sheathed when necessary.

Next year the sidewalk on the north side at the Cambridge end will have to be rebuilt, a new fence built, and the roadway paved. The sidewalk on the south side Boston end will have to be repaired and a new fence built. A part of the piles at the Cambridge end have been in place about one hundred years, and they have to be looked after very closely to prevent accidents.

Harvard Bridge.

Harvard bridge is in good condition. At the request of the riders of bicycles, for a width of three feet from the curbing on each side of the bridge, the sheathing which has just been completed, was laid lengthwise of the bridge, the balance being laid diagonally as heretofore. This flooring lasts about nine months, and then repairs have to be made. Last year about thirteen thousand feet of the best of the old sheathing was saved for patching, making quite a saving, and when sheathing the roadway this year about the same quantity was saved for use in a similar way next year.

The cost of sheathing the roadway was \$2,795, Boston paying one-half.

The whole length of the iron fence on each side of the bridge has been painted. The iron work outside the rail has been scraped and painted, and the house on the draw pier has been painted.

The West End Street Railway Company relaid their tracks on the bridge at the time the sheathing was done, putting in new rails where necessary. The sheathing between the rails and between the tracks was renewed with new plank, making a much better road than the old one. The West End Railway Company has always promptly responded to all requests for needed repairs or alterations.

Ordinary repairs on the bridge are made by the draw-tender and his assistants. They also clean the surface of the

bridge weekly, remove the snow from the sidewalk, and keep the electric light globes clean and in order.

Prison Point Bridge.

This bridge is in very bad condition. The draw, which is of the old-fashioned leaf pattern, is in such condition that it is almost impossible to raise it. It would require a considerable outlay to make it work easily, but we do not think it advisable to expend much money upon it, as it is expected that the Boston and Maine Railroad will begin the work of separating the grades of the road and railroad at this point next year and the plan for so doing provides for a new highway bridge over the channel.

The draw-tender's house has been painted outside, the two chimneys retopped, and the bridge and draw have been sheathed. Ordinary small repairs have been made and sweeping done by the draw-tender and assistants.

West Boston Bridge.

This bridge is in the same condition as it was last year. By watching it closely and making the necessary repairs promptly it is kept in good condition for travel. It is a constant care. We hope the time is not far distant when the cities of Boston and Cambridge, with the co-operation of the projected elevated railroad company, will see their way clear to build a new bridge of stone and iron.

The paving has been repaired on both sides of the roadway the entire length of the bridge. The roof of the engine-house has been stripped of the shingles that were badly decayed and a tin roof substituted, making it much safer against taking fire from sparks which are freely showered upon it from the smoke stacks of tugs while lying there. The engine-house, sheds and iron work have been painted.

The bridge has been swept once a week, always after midnight, and watered three times daily with salt water in dusty weather. Sweeping piers and draw, cleaning snow from draw piers and sidewalks, and ordinary repairs have been made by the draw-tender and his assistants. The draw has been sheathed when necessary.

The West End Street Railway Company relaid their tracks the whole length of the bridge, it being necessary to do so on account of the settling of the pavement, and the generally poor condition of the bridge.

IN GENERAL.

The usual statement is appended, showing the number of draw openings and the number of vessels which passed through, also the tables showing the traffic over bridges on September 29, 1897.

The amount of revenue received for rents, dockage, repairs to West End Street Railway Company's tracks, etc., during the year has been \$1,993.48 and one-half, \$996.74, has been paid to each city.

The following is a statement of the payments made by the City of Boston, on account of the Canal, Harvard, Prison Point and West Boston bridges, from February 1, 1897, to January 31, 1898:

Amount of appropriation for financial year, 1897-98	\$14,000 00
Transferred from the appropriation for Street Department, Central office	403 92

Total appropriation	\$14,403 92
Amount expended to January 31, 1898	\$14,403 92

Revenue February 1, 1897. — January 31, 1898.

DATE. 1897.	L. B. 3 and 4 Pages.	Received from.	Totals.	One-half City of Boston, City Collector.	One-half City of Cambridge.
1897					
March 5.	476	West End St. Ry. Co.... } Miller, Rent..... } Shaw, Rent..... } Bost. Adv't'g. Co., Rent. }	\$482 00	\$241 00	\$241 00
May 19.	4, page 6	Wharfage..... } Sept. 2. Wharfage..... }	258 00	129 00	129 00
	36	West End St. Ry. Co.....	853 48	426 74	426 74
Jan. 8.	82	N. E. Tel. & Tel. Co.....	200 00	100 00	100 00
Jan. 27.	88	West End St. Ry. Co.....	200 00	100 00	100 00
		Totals.....	\$1,993 48	\$996 74	\$996 74

Classification of Expenses.

Feb. 1, 1897, to Jan. 31, 1898.	Canal or Craigie's Bridge.	Harvard Bridge.	Prison Point Bridge.	West Boston Bridge.	General Account.	Totals.
Salaries, draw-tenders and others	\$1,358 41	\$1,292 00	\$393 18	\$1,292 00	\$250 00	\$4,585 59
Rebuilding sidewalk and fence.....	2,374 76	.....	.....	.....	.....	2,374 76
Electric lighting	239 60	1,096 41	.....	431 25	.....	1,767 26
Sheathing roadways.....	.....	1,397 50	.....	.....	.....	1,397 50
General repairs.....	412 15	90 27	126 99	93 34	.....	722 75
Cleaning bridges	255 19	78 95	.....	245 00	.....	579 14
Inspection	180 00	160 00	110 00	72 50	.....	522 50
Lumber	261 18	89 44	97 58	44 05	.....	492 25
Paving	66 21	.....	.....	343 49	.....	409 70
Paint and painting	88 88	202 91	46 22	26 70	.....	364 21
Sundry small supplies....	92 18	104 46	18 12	27 10	.....	241 86
Watering roadways	118 75	.....	.....	118 75	.....	237 50
Fuel... ..	111 93	16 23	.....	96 06	.....	224 22
Electric current .....	.....	143 75	.....	.....	.....	143 75
Iron-work	49 39	3 60	42 73	28 55	.....	124 27
Travelling expenses .....	.....	.....	.....	.....	78 42	78 42
Tools and hardware	23 17	31 70	2 58	13 21	.....	70 66
Water rates, 1897.....	16 00	.....	5 50	11 00	.....	32 50
Printing and stationery ..	.....	.....	.....	.....	31 95	31 95
Electric repairs .....	.....	3 13	.....	.....	.....	3 13
Totals.....	\$5,647 30	\$4,710 35	\$842 90	\$2,843 00	\$360 37	\$14,403 92

Statement showing Traffic over Bridges.

DATE. 1897.	Bridge.	Teams.	Horses.	Bicycles.	Pedestrians.	Electric Cars.	Car Passen- gers.
Sept. 29, 6 A.M. to 7 P.M.	Canal.....	7,349	10,532	228	9,266	725	15,333
	Harvard	2,966	3,787	3,024	8,095	798	20,230
	Prison Point.....	2,590	4,003	140	2,567	.....	.....
	West Boston.....	3,689	5,011	395	9,506	1,058	21,286
	Totals.....	16,594	23,333	3,787	24,434	2,581	56,849

Number of times the draws in Canal, Harvard, Prison Point, and West Boston Bridges have been opened and the number of vessels which have passed through for the year beginning February 1, 1897, and ending January 31, 1898.

DATE.	CANAL OR CRAIGIE'S.		HARVARD.		PRISON POINT.		WEST BOSTON.	
	Number of Draw Openings.	Number of Vessels Passed Through.	Number of Draw Openings.	Number of Vessels Passed Through.	Number of Draw Openings.	Number of Vessels Passed Through.	Number of Draw Openings.	Number of Vessels Passed Through.
Feb. 1, 1897, to Jan. 31, 1898.								
February, 1897....	98	132	6	7	19	27	8	13
March	138	180	29	30	29	41	28	39
April	263	401	121	156	58	90	94	72
May	371	489	170	198	57	82	144	228
June	393	525	268	323	35	48	197	305
July	320	421	235	274	59	90	205	299
August	422	561	218	278	62	80	219	331
September	482	521	226	239	29	48	231	313
October	316	439	210	219	30	48	184	272
November	259	366	147	154	49	74	146	224
December	302	464	170	198	43	70	151	234
January, 1898	126	199	20	17	28	44	30	37
Totals.....	3,490	4,698	1,820	2,093	498	742	1,637	2,467

- The following statement shows the work done by the various divisions:

SUMMARY OF WORK DONE.

BRIDGE DIVISION.

Overhauled and repaired the following bridges, viz.:

Beacon street (centre span), Blakemore street, Broadway, Chelsea bridge (North), Congress street, Essex street, Leyden street, Meridian street, Shawmut avenue, Warren and Western avenue.

A portion of Broadway bridge, 118 feet long by 30 feet wide, was entirely rebuilt.

Shawmut-avenue bridge was in poor condition, and the girders, cross-braces, roadway and iron-work were thoroughly overhauled, thus putting the bridge in good condition.

FERRY DIVISION.

The machinery and woodwork of six boats were thoroughly overhauled and painted, and two boats were thoroughly calked and metallled.

Four electric motors have been installed, thus equipping each landing with power to assist teams up the drops.

Three new boats have been equipped with electric lights, making five in all thus equipped.

The south pier, North Ferry, East Boston side, has been thoroughly repaired, and the landing at the South Ferry, East Boston side, has been raised, thus preventing flooding at high tide.

PAVING DIVISION.

Paved and regulated 37 streets with granite blocks, 21,759 square yards on concrete base, and 191,578 square yards on gravel base, or a total of about 213,337 square yards.

70,273 square yards gutters paved, 66,859 linear feet new edgestone set, and 176,508 linear feet reset, making a total of 243,367 linear feet set and reset.

Sidewalks laid and relaid as follows, viz.:

Brick, 89,900 square yards, new; and 47,065, old, relaid, or a total of 136,965 square yards.

Crushed stone, 35,247 square yards.

Artificial stone sidewalks, 127,389 square feet.

23,188 square yards asphalt have been laid on a concrete base.

Work has progressed on 21 streets laid out and ordered constructed under the "323" Act, and 13 of these streets have been finished.

SEWER DIVISION.

Built 30.5 miles of sewers, 412 new catch-basins, flushed 178 miles of sewers, removed 806 cubic yards of sewage deposit from sewers, and 1,008 cubic yards of sludge from pumping-station, and cleaned 6,655 catch-basins.

There are now about 475 miles of sewers maintained by this division.

SANITARY DIVISION.

Collected and removed 353,725 loads, of 54 cubic feet each, of house dirt, and 56,783 loads of offal.

STREET-CLEANING DIVISION.

Cleaned 13,261 miles of streets, removed 121,768 loads of street sweepings, etc., and emptied 129,064 public waste barrels.

STREET-WATERING DIVISION.

Watered 347.86 miles of streets.

EMPLOYMENT OF LABOR.

The report of the Civil Service Clerk follows, showing the classification of the employees of the department and the transfers and requisitions made for the several divisions of the Department.

During the year 118 applications were made upon the State Commission for 265 men of various grades and occupations; of this number 10 were for promotions and 18 were for the reinstatement of 37 men. 547 names were submitted, of which number 281 were selected and appointed, of whom 27 were chosen under the Veterans' Preference Act of 1896, and 34 provisional appointments were made under Civil Service Rule No. 36. Of the 10 applications made for promotions 9 were granted, 1 failing to pass the examination, and on the 18 requests for the reinstatement of 37 employees, 35 were granted and 2 rejected.

During the year 227 transfers were made, which the Commission approved, of which number 150 were from Transit, 27 from Water, 22 from Public Grounds, 16 from Park, 5 from Improved Sewerage, 3 from Mt. Hope Cemetery, 1 each from Health, Lamp and School Departments.

Notices of 128 discharges from the department rolls were forwarded to the Commission.

The department records show that there are now 3,384 persons eligible for employment in the several divisions and of that number 3,089 were upon the January, 1898, pay-rolls.

Grade and Number of Employees.

TITLE.	DIVISIONS.								Total.
	Central Office.	Paving.	Sewer.	Sanitary.	Street Cleaning.	Ferry.	Bridge.	Street Watering.	
Superintendent	1								1
Deputies		1	1	1	1	1	1	1	7
Purchasing Agent.....	1								1
Clerks.....	1	6	5	5	1	3	1		22
Messengers	1	12	8	6	4	2	6	2	41
Civil Engineers.....		2	10						12
Draughtsmen			24						24
Transitmen		11	11						22
Levelmen		4	12						16
Rodmen		7	63						70
Aids or tallymen.....		4		3	2				9
Inspectors.....		29	40	15					84
Foremen		10	9	7	7	1	1		35
Sub-Foremen.....		25	11	11	15	1	1		64
Superintendent of Street Patrol.....					1				1
Blacksmiths and assistants...		19	3	7	4	2			35
Boiler-makers.....						1			1
Bracers and assistants.....			22						22
Boys		12	19		15		7	1	54
Broom-makers					4				4
Bridge-cleaners.....							1		1
Captains.....				1		11			12
Carpenters and assistants.....		25	10		3	5	9		52
Caulkers.....							1		1
Cement-testers			4						4
Coal-passers.....			4						4
Chief of draws and bridges...							1		1
Chief drawtender.....							1		1
Drawtenders.....							20		20
Assistant drawtenders.....							36		36
Deck hands						24			24
<i>Carried forward.....</i>	4	167	256	56	57	51	86	4	681

Grade and Number of Employees.— *Continued.*

TITLE.	DIVISIONS.								Total.
	Central Office.	Paving.	Sewer.	Sanitary.	Street Cleaning.	Ferry.	Bridge.	Street Watering.	
<i>Brought forward</i>	4	167	256	56	57	51	86	4	681
Dumpers				25	7				32
Chief engineer (steam)			1						1
Engineers and assistants.....		18	35			11	16		80
Feeders				5	2				7
Firemen.....			9			21			30
Gatemen.....			4			12			16
Harness makers and assistants.....		2		5					7
Horseshoers.....				5					5
Hostlers.....			2				2		4
Iron-workers.....			2						2
Janitors						9			9
Janitresses						5			5
Joiners.....						4			4
Laborers and helpers.....		542	542	179	59	6			1,328
Lamplighters						2			2
Ledgemen.....			86						86
Locksmen.....			5						5
Machinists			2			3			5
Masons (stone and brick)			43						43
Mate.....			1						1
Measurers.....		1					1		2
Oilers.....			8			4			12
Pavers and assistants.....		38							38
Painters.....				10		1	7		18
Pilots.....			1			11			12
Pipe-layers.....			4						4
Powdermen.....		3							3
Riggers			2						2
Scowmen.....				4					4
Sheet-plank drivers.....			2						2
<i>Carried forward</i>	4	771	1,005	289	125	140	112	4	2,450

Grade and Number of Employees. — *Concluded.*

TITLE.	DIVISIONS.								Total.
	Central Office.	Paving.	Sewer.	Sanitary.	Street Cleaning.	Ferry.	Bridge.	Street Watering.	
<i>Brought forward</i>	4	771	1,005	289	125	140	112	4	2,450
Steam drillers.....		9							9
Stenographers.....	1		1						2
Stonecutters.....		26	3						29
Store-keepers.....			2			1			3
Sweepers.....					168				168
Stablemen.....		11	3	9	4				27
Teamsters.....		69	8	173	64		2		316
Tollmen.....						11			11
Watchmen.....		13	9	5	2	8	3		40
Weighers.....		6	1						7
Wharfingers and assistants.....		3	1						4
Wheelwrights.....				5					5
Yardmen.....		7		9	2				18
Total.....	5		1,033	490	365	160	117	4	3,089

Table Showing Transfers made from various City Departments to the Several Divisions.

DIVISIONS.	DEPARTMENTS.										Total.
	Transit.	Water.	Public Grounds.	Park.	Improved Sewerage.	Mt. Hope Cemetery.	Health.	Lamp.	Institution.	School.	
Paving.....	12	3	7	3	1	1			1	1	29
Sewer.....	128	10	8	8	4	2	1	1			162
Sanitary.....	5	4	3	1							13
Street Cleaning..	2	10	4	4							20
Ferry.....											0
Bridge.....	3										3
Street Watering..											0
Central Office....											0
Total.....	150	27	22	16	5	3	1	1	1	1	227

Table Showing the number of Applications for Various Grades of men made upon the Civil Service Commission for the Year ending January 31, 1898.

DIVISIONS.	Applications.	Number applied for.	Number submitted by C. S. C.	Number appointed.	Provisional appointment included in four previous columns.	Reinstatements included in four previous columns.	Veterans appointed included in four previous columns.
Paving	33	54	85	64	8	8	4
Sewer	46	154	260	158	25	14	11
Sanitary	13	14	148	15	.....	1	4
Street Cleaning	10	17	19	16	.....	11	3
Ferry	5	6	8	5	1	.....	2
Bridge	9	9	14	10	.....	3	3
Street Watering	1	10	12	12			
Central Office	1	1	1	1			
Total	118	265	547	281	34	37	27

Applications included nine, who were promoted. One applicant for promotion failed.

Eighteen requisitions cancelled, not included in above.

Eighteen applications for reinstatement; of thirty-seven men two refused by Civil Service Commission.

Twenty-seven veterans appointed; five were foremen, inspectors and sub-foremen, twenty-two mechanics and laborers.

The detailed financial statements, work done, etc., will be found in the Central Office Report and the nine appendices following :

Respectfully submitted,

BENJ. W. WELLS,

Superintendent of Streets.

CENTRAL OFFICE DIVISION.

EXPENSES OF THE CENTRAL OFFICE.

For the current expenses of the Central Office the City Council appropriated the sum of twenty thousand (20,000) dollars, which was expended as follows :

Salaries	\$15,148 85
General office expenditures	2,641 10
Total	<u>\$17,789 95</u>

leaving a balance of twenty-two hundred ten dollars and five cents (\$2,210.05), which was transferred as follows, viz. :

To the Street Watering Division	\$1,599 43
“ “ Paving Division	206 70
“ “ Boston and Cambridge Bridges, ...	403 92
	<u>\$2,210 05</u>

FINANCIAL STATEMENT OF THE STREET DEPARTMENT APPROPRIATION. *From February 1, 1897, to January 31, 1898.* MAINTENANCE.

APPROPRIATION.	Appropriations and transfers during 1897.	Revenue.	Total Credits.	Expenditures for the 12 months ending January 31, 1898.	Balances January 31, 1898.
Street Department:					
Central Office.....	1 \$17,789 95	.....	\$17,789 95	\$17,789 95	
Bridge Division.....	2 25,646 79	.....	126,530 32	126,530 32	
Boston and Cambridge Bridges.....	3 14,403 92	.....	14,403 92	14,403 92	
Ferry Division.....	4 219,983 24	.....	219,983 24	219,983 24	
Paving Division.....	5 689,910 54	276 80	690,187 34	690,187 34	
Sanitary Division.....	6 492,670 56	.....	492,670 56	492,670 56	
Sewer Division.....	7 295,292 58	229 67	295,522 25	295,522 25	
Street Cleaning Division.....	8 309,993 38	.....	309,993 38	309,993 38	
Street Watering Division.....	9 78,736 72	.....	78,736 72	78,736 72	
Totals.....	\$2,244,427 36	\$1,389 00	\$2,245,816 36	\$2,245,816 36	
1 Appropriation 1897-98.....	\$20,000 00	4 Appropriation 1897-98.....	\$220,000 00	7 Appropriation 1897-98.....	\$300,000 00
Transferred to Street Watering Division.....		Transferred to Paving Division.....	16 76	Work done for Corporations.....	229 67
Transferred to Boston and Cambridge Bridges.....	\$1,590 43	Transferred from "Surplus Revenue".....	\$219,983 24	Transferred from "Surplus Revenue".....	2,429 87
Transferred to Paving Division.....	403 92	5 Appropriation 1897-98.....	\$600,000 00	Transferred to Street Watering Division,.....	\$302,659 54
	206 70	Repaying for Corporations.....	276 80		7,137 29
		Revenue.....	\$29,680 46		\$295,522 25
	2,210 05	Transferred from Central Office.....	206 70	8 Appropriation 1897-98.....	\$310,000 00
	\$17,789 95	Transferred from Ferry Division.....	16 76	Transferred to Paving Division.....	6 62
2 Appropriation 1897-98.....	\$125,000 00	Transferred from Street Cleaning Division.....	6 62	9 Appropriation 1897-98.....	\$309,993 38
Work done for Corporations.....	882 83			Transferred from Sewer Division.....	\$70,000 00
Transferred from "Surplus Revenue,".....	646 79		29,910 54	Transferred from Central Office.....	1,590 43
	\$126,529 32		\$600,187 34		8,736 72
3 Appropriation 1897-98.....	\$14,000 00	6 Appropriation 1897-98.....	\$460,000 00	Transferred from Surplus Revenue to pay water bills of 1897-1898.....	\$78,736 72
Transferred from Central Office.....	403 92	Transferred from "Surplus Revenue,".....	32,670 56		76,380 40
	\$14,403 92		\$462,670 56		

Comparative Table showing Cost of Maintenance of the Street Department since Organization.

DIVISION.	1891-'92. (13 months.)	1892-'93.	1893-'94.	1894-'95.	1895-'96.	1896-'97.	1897-'98.
Central Office	¹ \$16,050 00	\$18,793 60	\$20,805 96	\$20,884 29	\$18,315 79	\$18,751 85	\$17,789 95
Bridge.....	123,010 63	128,934 37	133,159 24	130,137 21	119,716 00	119,963 55	126,529 32
Boston and Cambridge Bridges.	11,866 42	11,079 76	11,493 16	11,986 85	12,537 33	13,835 54	14,403 92
Ferry .....	.....	.....	.....	.....	209,911 30	218,353 10	219,983 24
Paving.....	872,936 40	915,460 99	745,681 52	715,608 62	683,899 42	628,675 46	690,187 34
Sanitary.....	² 509,342 24	469,370 74	481,300 63	467,459 02	432,778 52	477,241 54	492,670 56
Sewer	446,222 69	560,608 19	373,517 38	304,193 40	280,596 07	276,615 25	295,522 25
Street Cleaning	³ 215,929 33	288,320 42	308,707 30	301,477 44	305,998 50	310,266 39	309,993 38
Street Watering.....	104,263 62	94,507 80	99,430 16	87,169 08	76,424 70	71,211 81	578,736 72
Totals	\$2,299,621 33	\$2,487,095 87	\$2,174,095 35	\$2,038,855 91	⁴ \$2,140,177 63	\$2,134,944 49	\$2,245,816 36

¹ Nine months only.² Includes street cleaning for four months to May 1, 1891.³ Nine months only, but includes expenditure for Street Police, May 1 to July 10, 1891 — \$464.41.⁴ For comparison, deduct Ferry Division, not before shown, making total — \$1,389,266.33.⁵ Not including water bills of \$76,330.72 not previously paid by Street Watering Division.

Bridge Division Specials.

OBJECT OF APPROPRIATION.	Appropriations, Balances and Transfers.	Expended from Feb. 1, 1897, to Jan. 31, 1898.	Balances on hand Jan. 31, 1898.
Charles-river Bridge, draw	\$407 04	\$407 04	
Chelsea Bridge, North ¹	3,030 54	3,030 54	
Essex-street Bridge, reconstruction ...	1,530 57	1,530 57	
Gold-street Bridge.....	21,223 38	² 27,223 38	
Harvard-street Bridge.....	3,000 00	356 20	\$2,643 80
Leyden-street Bridge, reconstruction..	1,000 00	1,000 00	
Meridian-street Bridge.....	1,833 61	1,833 61	
Reconstruction of Bridges.....	13,500 00	1,884 62	11,615 38
Talbot-avenue Bridge.. ..	25,000 00	.....	25,000 00
Warren Bridge, reconstruction.....	2,000 00	2,000 00	
Totals.....	\$72,525 14	\$39,265 96	\$39,259 18

¹ Balance January 31, 1897, was \$5,030.54, of which \$2,000 was transferred to Warren Bridge, reconstruction, May 11, 1897.

² \$6,000 to be provided for.

Ferry Division Specials.

OBJECT OF APPROPRIATION.	Appropriations, Balances and Transfers.	Expended from Feb. 1, 1897, to Jan. 31, 1898.	Balances on hand Jan. 31, 1898.
Electric lights for ferry-boats.....	\$8,000 00	\$5,862 88	\$2,137 12
New ferry landing (chapter 435, Acts of 1895).....	478,038 39	42,296 20	435,742 19
Totals	\$486,038 39	\$48,159 08	\$437,879 31

Paving Division Specials.

OBJECT OF APPROPRIATION.	Appropriations, Balances and Transfers.	Expended from Feb. 1, 1897, to Jan. 31, 1898.	Balances on hand Jan. 31, 1898.
Abbotsford street.....	\$570 00	\$570 00	
Adams street, Ward 24	7,500 00	7,500 00	
Adelaide street, Ward 22	4,000 00	4,000 00	
Albany street, in front of Massachusetts Homeopathic Hospital.....	10,500 00	6,140 08	\$4,359 92
Appleton street.....	12,300 00	13,300 00	
<i>Carried forward</i>	\$35,870 00	\$31,510 08	\$4,359 92

Paving Division Specials. — *Concluded.*

OBJECT OF APPROPRIATION.	Appropriations, Balances and Transfers.	Expended from Feb. 1, 1897, to Jan. 31, 1898.	Balances on hand Jan. 31, 1898.
<i>Brought forward</i>	\$35,870 00	\$31,510 08	\$4,359 92
Boylston street, Berkeley to Clarendon street.....	12,496 90	12,496 90	
Brooks street, Ward 25	35,000 00	.....	35,000 00
Calumet street	324 00	324 00	
Cabot street, asphaltting	12,000 00	6,770 47	5,229 53
Carleton street.....	8,000 00	354 96	7,645 04
Centre street, Dorchester.....	7,132 90	7,132 90	
Centre street, Roxbury.....	5,000 00	5,000 00	
Centre street, Ward 23.....	10,000 00	10,000 00	
Charles street.....	19,935 39	19,935 39	
Commonwealth avenue.....	31,756 55	27,651 01	4,105 54
Congress and L streets.....	2,958 61	2,958 61	
Dudley street.....	34,943 75	33,804 75	1,139 00
Eleanor and Ridgmont streets	605 51	.....	605 51
Endicott street.....	8,000 00	.....	8,000 00
Franklin street, Ward 25	1,700 52	1,700 52	
Freeport street, retaining-wall	7,500 00	93 75	7,406 25
Lafayette avenue.....	2,000 00	.....	2,000 00
Lamartine street, Ward 22.....	10,000 00	10,000 00	
Lincoln place.....	1,500 00	1,500 00	
McLellan street.....	1,699 56	1,699 56	
North Margin street	2,000 00	1,415 98	584 02
Quincy street, Ward 4	5,718 82	3,516 44	2,202 38
Rand street, Roxbury	3,600 00	1,995 45	1,604 55
State street.....	18,000 00	18,000 00	
Sydney street.....	7,063 60	5,560 54	1,503 06
Tremont street, Lenox street to Roxbury Crossing	17,024 45	17,024 45	
Unity street.....	5,000 00	2,651 94	2,348 06
Washington street, Dover street to Union Park street	20,000 00	20,000 00	
Washington street, Eliot street to Dover street.....	35,000 00	35,000 00	
Western avenue	10,000 00	10,000 00	
Wharf and Buildings, Chelsea street, East Boston.....	15,000 00	15,000 00	
Totals.....	\$386,830 56	\$303,097 70	\$83,732 86

Street Improvements.

OBJECT OF APPROPRIATION.	Appropriations, Balances and Transfers.	Expended from Feb. 1, 1897, to Jan. 31, 1898.	Balances on hand Jan. 31, 1898.
Street Improvements, Ward 1.....	\$25,148 16	\$25,148 16	
Street Improvements, Ward 2.....	25,337 28	25,337 28	
Street Improvements, Ward 3.....	42,772 39	25,724 68	\$17,047 71
Street Improvements, Ward 4.....	40,473 67	27,052 54	13,421 13
Street Improvements, Ward 5.....	25,532 52	25,249 36	283 16
Street Improvements, Ward 6.....	27,598 81	27,327 31	271 50
Street Improvements, Ward 7.....	33,295 95	27,061 42	6,234 53
Street Improvements, Ward 8.....	28,889 29	21,529 98	6,859 31
Street Improvements, Ward 9.....	57,587 32	52,569 48	5,017 84
Street Improvements, Ward 10.....	27,075 01	26,892 60	182 41
Street Improvements, Ward 11.....	26,724 37	26,724 37	
Street Improvements, Ward 12.....	30,117 23	28,822 19	1,295 04
Street Improvements, Ward 13.....	38,146 28	34,948 77	3,197 51
Street Improvements, Ward 14.....	40,136 89	34,355 43	5,781 46
Street Improvements, Ward 15.....	40,511 29	29,590 78	10,920 51
Street Improvements, Ward 16.....	34,732 83	29,895 58	4,837 25
Street Improvements, Ward 17.....	25,000 00	25,000 00	
Street Improvements, Ward 18.....	33,371 57	32,276 44	1,095 13
Street Improvements, Ward 19.....	40,928 18	34,688 87	6,239 31
Street Improvements, Ward 20.....	25,000 00	25,000 00	
Street Improvements, Ward 21.....	29,573 41	29,573 41	
Street Improvements, Ward 22.....	26,691 37	26,691 37	
Street Improvements, Ward 23.....	25,000 00	25,000 00	
Street Improvements, Ward 24.....	25,000 00	25,000 00	
Street Improvements, Ward 25.....	41,137 53	41,137 53	
Totals.....	\$815,281 35	\$732,597 55	\$82,683 80

Laying-out and Construction of Highways.

Expenditures.

Sewer construction	¹ \$196,199 39
Street construction	² 261,124 44
Totals	<u>\$457,323 83</u>

¹ Includes \$5,051.46 expended on Blue Hill and other Avenues.² Includes \$82,746.91 expended on Blue Hill and other Avenues.

Sewer Division Specials.

OBJECT OF APPROPRIATION.	Appropriations, Balances and Transfers.	Expended from Feb. 1, 1897, to Jan. 31, 1898.	Balances on hand Jan. 31, 1898.
Canal-street Relief	\$17,462 03	\$17,462 03	
Connections with Metropolitan Sewer, Charlestown	20,630 36	20,630 36	
Connections with Metropolitan Sewer, East Boston	19,125 67	19,125 67	
Dam from Maverick street to Prescott street, East Boston	3,000 00	.....	\$3,000 00
D-street Outlet and Relief Sewer, Dorchester avenue, South Boston	23,000 00	23,000 00	
Forest-avenue Section, Temporary Sewer, Outlet, etc.	1,314 94	1,314 94	
Pumping Station, Improvements	4,982 25	4,982 25	
Sewer Outlet, Low Level, West Roxbury District	3,181 07	3,181 07	
Sewers, South Boston	794 71	794 71	
Sewer Outlets, South Boston	16,104 92	16,104 92	
Shamrock-street Outlet	7,041 95	7,041 95	
Storm Sewer, Cornwall and Washington streets, Ward 22.	596 48	596 48	
Stony Brook, Improvement	401,849 26	260,741 16	141,108 10
Sewerage Works	500,000 00	464,830 00	35,170 00
Totals	\$1,019,083 64	\$889,805 54	\$179,278 10

Blue Hill and other Avenues.*Expenditures. (See Note.)*

OBJECT OF APPROPRIATION.	Street Construction.	Sewer Construction.	Totals.
Blue Hill avenue	\$83,778 87	\$3,652 06	\$87,430 93
Columbus avenue	49,893 31	13,209 54	63,102 85
Commonwealth avenue	6,835 58	24,368 62	31,204 20
Huntington avenue	17,566 71	4,674 46	22,241 17
Totals	\$158,074 47	\$45,904 68	\$203,979 15

NOTE.—These expenditures include \$82,746.91 for Street Construction and \$5,051.46 for Sewer Construction on Blue Hill and other Avenues, and paid out of the appropriation for Laying-Out and Construction of Highways.

South Union Station.*Expenditures.*

Sewer construction	.	.	.	.	.	\$87,984 59
Street construction	:	:	:	:	:	6,885 28
						<u>\$94,869 87</u>

**Recapitulation of Expenditures for the Twelve Months ending
January 31, 1898.**

OBJECT OF APPROPRIATION.	Current Expenses for the twelve months ending Jan. 31, 1898.	Special Appropriations.	Totals.
Street Department:			
Central Office	\$17,789 95	.....	\$17,789 95
Bridge Division	126,529 32	\$39,265 96	165,795 28
Boston and Cambridge Bridges....	14,403 92	.....	14,403 92
Ferry Division	219,983 24	48,159 08	268,142 32
Paving Division.....	690,187 34	303,097 70	993,285 04
Sanitary Division.....	492,670 56	.....	492,670 56
Sewer Division	295,522 25	839,805 54	1,135,327 79
Street Cleaning Division	309,993 38	.....	309,993 38
Street Watering Division.....	178,736 52	.....	78,736 52
Street Improvements.....	.....	732,597 55	732,597 55
Laying-Out and Construction of Highways.....	.....	457,323 83	457,323 83
Blue Hill and other Avenues.....	.....	116,180 78	116,180 78
South Union Station.....	.....	94,869 87	94,869 87
Totals	\$2,245,816 36	\$2,631,300 31	\$4,877,116 99

¹Not including water bills of \$76,930.40 not previously paid by the Street Watering Division.

**Street Building under Chapter 323 of the Acts of 1891, or
Special Acts or Amendments thereto.**

STREET.	Paving.	Sewer.	Total.
Abbotsford st.	\$151 11	.....	\$151 11
Athelwold st.	7,059 79	\$4,305 55	11,365 34
Audubon road	290 69	.....	290 69
Bay State road	2 50	.....	2 50
Bearse st.	5 50	.....	5 50
Belmore terrace	19 75	523 91	543 66
Belvidere st.	155 67	.....	155 67
Bernard st.	115 00	6,741 18	6,856 18
Bloomfield st.	5,460 80	1,089 28	6,550 08
Boylston st.	14,379 86	85 75	14,465 61
Brighton ave.	1,806 19	.....	1,806 19
Bryant st.	4 00	.....	4 00
Burt st.	18 75	8,634 30	8,653 05
Chamberlain st.	3,036 92	23 27	3,060 19
Chamblet st.	10 75	1,126 05	1,136 80
Clinton st.	18 00	19 27	37 27
Columbia road.....	19,134 96	2,392 53	21,527 49
Elizabeth st.	22 25	6,468 94	6,491 19
Ellet st.	2,896 38	567 25	3,463 63
Engineering expense.....	239 82	.....	239 82
Fairmount st.	2,611 02	5,955 74	8,566 76
Fenelon st.	181 87	16 99	198 86
Fullerton st.	4,406 48	2,728 72	7,135 20
Gaylord st.	2,492 74	22 20	2,514 94
Geneva ave.	13,139 89	200 97	13,340 86
Granby st.	120 00	.....	120 00
Greenbrier st., between Bowdoin and Bloomfield streets.....	130 00	.....	130 00
Greenbrier st., between Park and Bloomfield sts..	5,305 37	366 44	5,671 81
Harvard st.	40 00	.....	40 00
Ipswich st.	21,122 90	491 43	21,614 33
Lauriat ave.	7,619 81	625 00	8,244 81
Leroy st.	30 50	1,299 00	1,329 50
Malvern st.	9 00	461 69	470 69
Medway st.	9 00	.....	9 00
Morse st.	98 40	10 23	108 63
<i>Carried forward.....</i>	\$112,145 67	\$44,155 69	\$156,301 36

**Street Building under Chapter 323 of the Acts of 1891, or
Special Acts or Amendments thereto.—*Concluded.***

STREET.	Paving.	Sewer.	Total.
<i>Brought forward</i>	\$112,145 67	\$44,155 69	\$156,301 36
Norway st.	6,054 06	.....	6,054 06
Oakley st. ....	.....	807 51	807 51
Peterborough st.	25,882 33	18,209 50	44,091 83
Peverell st.	469 12	.....	469 12
Queensberry st.	18,029 00	.....	18,029 00
Rosseter st.	5 00	1,584 23	1,589 23
Ruggles st.	1,002 34	4,326 67	5,329 01
St. Alphonsus st.	346 00	.....	346 00
St. Stephen st.	1,167 17	.....	1,167 17
Tonawanda st.	2,137 59	2,871 79	5,009 38
Turner st.	6,334 02	.....	6,334 02
Vancouver st.	571 60	2,959 52	3,531 12
Vose st.	5 50	.....	5 50
Waterlow st.	5 00	.....	5 00
Wilder st.	341 82	33 15	374 97
Wolcott st.	3,881 31	62 26	3,943 57
Parker, Turner and Norway sts. ....	.....	10,343 79	10,343 79
Total	\$178,377 53	\$85,354 11	\$263,731 64
Blue Hill ave.	37,804 17	68 27	37,872 44
Columbus ave.	37,867 15	1,564 95	39,432 10
Commonwealth ave.	1,083 80	3,204 91	4,288 71
Huntington ave.	5,991 79	213 33	6,205 12
Grand total	\$261,124 44	\$90,405 57	\$351,530 01

**List of Contracts from February 1, 1897, to January 31, 1898,
made by the Street Department.**

Paving-Blocks.

CONTRACT.	Awarded to	Dated	Price per M. delivered on wharves.
Large Paving-blocks, 300,000 ...	Rockport Granite Co...	Feb. 24, 1897	\$44 90
Large Paving-blocks, 100,000 ...	Rockport Granite Co...	Sept. 13, 1897 ...	50 00
Large Paving-blocks, 100,000 ...	Cape Ann Granite Co...	Sept. 13, 1897 ...	50 00
Large Paving-blocks, 100,000 ...	Pigeon Hill Granite Co.	Sept. 13, 1897 ...	50 00
Gutter Paving-blocks, 200,000...	Rockport Granite Co...	Sept. 13, 1897 ...	37 00

Spruce Lumber.

DISTRICT.	Awarded to	Dated	Price per M. ft. B. M.	Price for Planing per M. ft.
South Boston.....	A. M. Stetson & Co.	March 5, 1897.	\$14 70	\$1 00
East Boston.....	Jewett Lumber Co.....	Feb. 24, 1897..	15 50	0 50
Charlestown	Curtis & Pope Lumber Co.,	March 5, 1897.	15 50	0 95
Brighton	Curtis & Pope Lumber Co.,	March 5, 1897.	15 00	0 95
West Roxbury...	Curtis & Pope Lumber Co.,	March 5, 1897.	15 90	0 95
Dorchester	Curtis & Pope Lumber Co.,	March 5, 1897.	15 50	0 95
Roxbury	Curtis & Pope Lumber Co.,	March 5, 1897.	15 20	0 95
City Proper	Curtis & Pope Lumber Co.,	March 5, 1897.	14 95	0 95

Beach Gravel.

DISTRICT.	Awarded to	Dated	Price per ton delivered on wharves.
City Wharves.....	William T. Cargill	March 19, 1897..	\$0 55½

Iron Castings.

CONTRACT.	Awarded to	Dated	Price per 100 lbs.
Iron castings.....	Osgood & Hart.....	May 7, 1897	\$1 25

Coal.

CONTRACT.	Awarded to	Dated	Price per ton, 2,240 lbs.
1,500 tons, Pumping Station, Dorchester	L. G. Burnham & Co.	Feb. 5, 1897....	\$3 16
3,000 tons, Pumping Station, Dorchester	G. M. Winslow & Co.	April 27, 1897...	2 67
800 tons, Pumping Station, Dor- chester	Loyal Hanna Coal and Coke Com- pany	Dec. 30, 1897....	2 95
6,000 tons, Ferry Wharves.....	John Morrison.....	March 23, 1897..	2 72
2,000 tons, Ferry Wharves.....	Loyal Hanna Coal and Coke Com- pany	Jan. 27, 1898....	2 65

Bank Gravel and Sand.

DISTRICT.	Awarded to	Dated	PRICE.			
			Gravel.		Sand.	
			A.	B.	A.	B.
South Boston	P. O'Riorden...	March 23, 1897..	\$1 43	\$0 73	\$1 43	\$0 73
Charlestown	P. O'Riorden...	March 23, 1897..	1 70	0 80	1 50	0 80
City Proper.....	P. O'Riorden...	March 23, 1897..	1 37	0 75	1 58	0 70
East Boston.....	L. F. Leary....	March 20, 1897..	1 40	0 69	1 40	0 69
Brighton	W. Scollans	March 23, 1897..	1 59	0 79½	1 59	0 79½
West Roxbury....	J. Doonan	March 20, 1897..	0 89	0 45	0 89	0 45
Dorchester	J. J. Nawn.....	March 20, 1897..	1 25	0 60	1 50	0 70
Dorchester	J. McGovern...	May 25, 1897....	1 43	0 72	1 43	0 72
Roxbury	O. Nawn	March 20, 1897..	1 25	0 55	1 40	0 60

EXPLANATION OF LETTERS: A, double loads; B, single loads.

Crosswalk Flagging.

CONTRACT.	Awarded to	Dated	PRICE PER SQ. FT.	
			On wharves.	On streets.
North River	J. J. Cuddihy.....	March 19, 1897..	\$0 28	\$0 31½
Granite	Rockport Granite Co...	March 19, 1897..	0 28½	

Lease of Land.

CONTRACT.	Lessor	Dated	Price.
Flats and docks, Public Landing, East Boston..	East Boston Dry Dock Co.....	July 10, 1897...	\$250 00 per year, pay- able quarterly.

Lease of Ledge Lots, Quarrying Stone, etc.

CONTRACT.	Lessor	Dated	Terms.
Lease of ledge lot, Kenney st., near Day st. ¹	J. W. Kenney.....	March 12, 1895.	\$0.15 per ton
Lease of ledge lot, Rosseter st. ² ..	W. T. Emerson.....	March 12, 1895.	0.25 per ton
Lease of ledge lot, Heath st., near Day st. ³	F. Bieller.....	March 30, 1896.	0.20 per ton
Lease of ledge lot, Centre st., between Allandale and Walter sts. ⁴	John M. Minton.....	August 1, 1896.	0.18 per ton
Quarrying, cutting and delivering stone from Chestnut Hill-ave. ledge.....	M. Kiernan.....	May 28, 1897.	0.70 per ton
Furnishing stone to Codman-st. crusher.....	James A. King.....	June 19, 1897.	0.80 per ton
Quarrying, cutting and delivering stone from Centre-st. ledge.....	T. F. Minton.....	August 2, 1897.	0.70 per ton
Quarrying, cutting and delivering stone from Rosseter-st. ledge.....	P. F. Lonergan.....	September 13, 1897	0.70 per ton

¹ Extended February 1, 1896, for three years.² Extended February 1, 1896, for two years.³ Extended January 30, 1897, for one year.⁴ Extended January 30, 1897, for three years.

Collecting and Removing Ashes.

CONTRACT.	Awarded to	Dated	Price.
Collecting and removing ashes, etc., Dorchester District.....	Denis Flynn.....	April 10, 1897.....	\$3,850 per year for two years.
Collecting and removing ashes, etc., West Roxbury District.....	John J. Moore.....	April 10, 1897.....	\$2,100 per year for two years.

Collecting and Removing House, Offal.

CONTRACT.	Awarded to	Dated	Price.
Collecting and removing house offal in the Dorchester District.....	J. Bradley.....	May 11, 1897.....	\$4,980 per year for three years.

Abutments, Retaining Walls and Bridge Strengthening.

CONTRACT.	Awarded to	Dated	Price.
Rebuilding sidewalk and fence, Canal bridge.....	W. H. Ryan & Co.....	May 3, 1897.....	(A) \$39 75 (B) 45 47 (C) 33 00 (D) 0 74 (E) 0 22 (F) \$11 00 (G) 0 52 (H) 39 00 (I) 0 39
Sheathing roadway of Harvard bridge.....	Joseph Ross.....	October 15, 1897..	1 \$2,795 00
Building retaining walls, abutments and piers on Ipswich st.....	Holbrook, Cabot & Daly ...	November 29, 1897.	Retaining wall east of the Fens, \$4,780—remainder of the work, \$31,100
Retaining wall for Stony Brook bridge on Hyde Park ave.....	William Hennessey.....	November 18, 1897.	\$470
Building Talbot-ave. bridge.....	New England Railroad Co....	October 13, 1897....	A sum not exceeding \$25,000
Retaining-wall along Blue Hill ave., between Seaver and Canterbury sts.....	Metropolitan Construction Company.....	July 8, 1897.....	\$8,487.00.
Retaining-wall along Covington st., between Thomas park and East Eighth st.....	T. F. Broderick.....	August 3, 1897....	\$880.00.
Retaining-wall along Freeport st. at the Dorchester Yacht Club.....	Collins & Ham.....	December 9, 1897.	\$5,950.00.

Retaining-wall on Blue Hill ave. in front of the Hobcock estate.....	E. Bertram Newton.....	September 15, 1897	\$500.00.
Building retaining-wall, Columbus ave., near Rox- bury crossing.....	William Hennessey.....	November 10, 1897	\$665.00.

EXPLANATION OF LETTERS.

(A) For each 1,000 ft. B. M. H. P. bulkhead stringers and curb timber in place. (B) For each 1,000 ft. B. M. 6-in. H. P. roadway floor in place. (C) For each 1,000 ft. B. M. 3-in. H. P. sidewalk floor in place. (D) For each lineal foot of hard-pine fence in place. (E) For each lineal foot of edgestone reset. (F) For each 1,000 hard-burned paving-brick delivered. (G) For each square yard of brick paving laid. (H) For each 1,000 new granite blocks delivered. (I) For each square yard of block-stone paving laid.

¹One-half cost to be paid by the City of Cambridge.

¹ Artificial Stone Sidewalks.

CONTRACTOR.	Dated	Price.
Aberthaw Construction Company	May 6, 1897.....	6 cts. per square foot.
T. J. Hind.....	May 6, 1897.....	6 cts. per square foot.
P. F. Lonergan.....	May 6, 1897.....	6 cts. per square foot.
W. A. Murtfeldt Company.....	May 6, 1897.....	6 cts. per square foot.
H. P. Nawn.....	Sept. 2, 1897.....	6 cts. per square foot.
Simpson Bros. Corporation.....	May 6, 1897.....	6 cts. per square foot.
M. F. Sullivan.....	Dec. 3, 1897.....	6 cts. per square foot.
J. Uffell & Co.....	May 6, 1897.....	6 cts. per square foot.

¹ These walks were laid on various accepted streets where the Contractor had agreements with the abutters.

Paving with Trinidad Asphalt.

CONTRACT.	Awarded to	Dated	Price.
Cabot st., between Vernon and Linden Park sts...	Barber Asphalt Paving Co...	July 23, 1897.....	(A) \$3.00 per square yard.
Wiget st., between Salem and North Margin sts. ...	Barber Asphalt Paving Co...	July 23, 1897.....	(A) \$3.00 per square yard.
Lincoln pl., between Springfield and Worcester sts.....	Barber Asphalt Paving Co...	August 10, 1897...	(A) \$3.00 per square yard.
Boylston st., from Berkeley beyond Clarendon st.,	Barber Asphalt Paving Co...	August 30, 1897...	(A) \$3.00 per square yard.
Unity st., between Charter and Thacher sts.....	Barber Asphalt Paving Co...	September 8, 1897.	(A) \$3.00 per square yard.
Rutherford ave. and Devens st., around St. John's Episcopal Church.....	Barber Asphalt Paving Co...	September 20, 1897	(A) \$3.00 per square yard.
Tufts, Vine, Corey and Moulton sts., around St. Catherine's Catholic Church.....	Barber Asphalt Paving Co...	September 20, 1897	(A) \$3.00 per square yard.
La Grange st., between Police Station 4 and Tremont st.....	Barber Asphalt Paving Co. .	September 20, 1897	(A) \$3.00 per square yard.
Cooper st., between Endicott and Charlestown sts.,	Barber Asphalt Paving Co...	September 25, 1897	(B) \$2.25 per square yard.

(A) Furnishing 6 in. American cement concrete base, wearing surface and binder. (B) Furnishing asphalt wearing surface and binder on existing concrete base.

Paving with Sicilian Rock Asphalt.

Bradford st., between Waltham st. and Shawmut ave.	Boston Asphalt Company ...	July 23, 1897.....	(A) \$3.00 per square yard.
Broadway, in front of Lincoln School.....	Boston Asphalt Company ...	August 30, 1897...	(A) \$3.00 per square yard.
Mayo st., between Castle and Cobb sts.	Boston Asphalt Company ...	August 30, 1897...	(A) \$3.00 per square yard.
Cobb st., between Washington st. and Shawmut ave.....	Boston Asphalt Company	August 30, 1897...	(A) \$3.00 per square yard.

Exeter pl., between Chauncey st. and Harrison ave.
 Avery and Mason sts.
 Broadway, between 113 ft. west of F st., to 308 ft. east of F st.
 Albany st., between Stoughton and East Concord sts.
 North Margin st., from Thacher towards Endicott st.

Boston Asphalt Company ... August 30, 1897... (A) \$3.00 per square yard.
 Boston Asphalt Company ... September 6, 1897. (B) \$3.25 per square yard.
 Boston Asphalt Company ... October 1, 1897.... (C) \$3.37½ per square yard.
 Boston Asphalt Company ... October 30, 1897... (C) \$3.37½ per square yard. (D) \$2.25 per square yard.
 Boston Asphalt Company ... November 15, 1897 (E) \$3.12½ per square yard.

(A) Furnishing a 6-in. American cement concrete base and wearing surface. (B) Furnishing a 6-in. Portland cement concrete base and wearing surface. (C) Excavating for and furnishing a 6-in. Portland cement concrete base and wearing surface. (D) Furnishing asphalt wearing surface on existing concrete base. (E) Furnishing a 6-in. Portland cement concrete base and wearing surface.

Paving with Seyssel Rock Asphalt.

CONTRACT.	Awarded to	Dated	Price.
Pelham st., between Washington st. and Shawmut ave.	Jones & Meehan.....	August 30, 1897...	(A) \$3.00 per square yard.
Paul st., between Tremont and Emerald sts.	Jones & Meehan.....	August 30, 1897...	(A) \$3.00 per square yard.
Waterford st., between Washington st. and Shawmut ave.....	Jones & Meehan.....	October 26, 1897...	(A) \$3.00 per square yard.

(A) Furnishing 6-in. American cement concrete base and wearing surface.

Paving with Asphaltina.

Massachusetts ave., easterly side, between Tremont st. and Columbus ave.....	Boston Paving Company....	September 14, 1897	(A) \$2.75 per square yard.
(A) Furnishing a 6-in. American cement concrete base, wearing surface and binder.			

Paving and Regulating.

CONTRACT.	Awarded to	Dated	Price.
Trenont st., between Columbus ave. and Ruggles st., paving with granite blocks on a gravel base, and regulating.....	Jones & Meehan.....	April 7, 1897.....	(F) \$0.25 per sq. yd.; (D) \$0.08 per lin. ft.; (E) \$0.18 per sq. yd.; (G) \$0.36 per sq. yd.
Washington st., between Kneeland st. and the B. & A. R.R. bridge, paving with granite blocks, pitch joints on a concrete base, and regulating..	William Higgins.....	June 12, 1897.....	(B) \$5.00 per cu. yd.; (C) \$0.90 per sq. yd.; (D) \$0.08 per lin. ft.; (E) \$0.18 per sq. yd.; (F) \$0.25 per sq. yd.
Washington st., between the B. & A. R.R. bridge and Dover st., paving with granite blocks, pitch joints on a concrete base, and regulating.....	Jones & Meehan.....	June 12, 1897.....	(B) \$5.00 per cu. yd.; (C) \$0.90 per sq. yd.; (D) \$0.08 per lin. ft.; (E) \$0.18 per sq. yd.; (F) \$0.25 per sq. yd.
State st., between Washington and Commercial sts., paving with granite blocks, pitch joints on a concrete base, and regulating.....	H. Gore & Co.....	June 12, 1897.....	(C) \$0.90 per sq. yd.; (D) \$0.08 per lin. ft.; (E) \$0.18 per sq. yd.; (F) \$0.25 per sq. yd.
Broadway, between E st. and the N. E. R.R., paving with granite blocks on a gravel base, and regulating, Sicilian rock asphalt gutters on a concrete base.....	H. Gore & Co.....	July 8, 1897.....	(F) \$0.25 per sq. yd.; (D) \$0.08 per lin. ft.; (E) \$0.18 per sq. yd.; (H) \$3.00 per sq. yd.
Main st., from Miller st. across Hancock sq., paving with granite blocks on a gravel base, and regulating.....	John Turner & Co.....	July 3, 1897.....	(A) \$0.15 per sq. yd.; (F) \$0.25 per sq. yd.; (D) \$0.15 per lin. ft.; (D) \$0.08 per lin. ft.; (E) \$0.18 per sq. yd.; (E) \$0.25 per sq. yd.
Washington st., between Dover and Waltham sts., paving with granite blocks, pitch joints on a gravel or concrete base, and regulating.....	Jones & Meehan.....	August 21, 1897....	(D) \$0.08 per lin. ft.; (B) \$5.00 per cu. yd.; (C) \$0.90 per sq. yd.; (E) \$0.18 per sq. yd.
Charles st., between Cambridge and Leverett sts., paving with granite blocks, pitch joints on a gravel base, and regulating.....	Dennis J. Kiley.....	August 25, 1897....	(D) \$0.08 per lin. ft.; (C) \$0.90 per sq. yd.; (E) \$0.18 per sq. yd.; (F) \$0.25 per sq. yd.
Congress st., between State st. and Exchange pl., paving with granite blocks, pitch joints on a concrete base, and regulating.....	H. Gore & Co.....	October 1, 1897....	(D) \$0.15 per lin. ft.; (C) \$0.90 per sq. yd.; (F) \$0.25 per sq. yd.; (E) \$0.23 per sq. yd.

Winthrop sq., paving with granite blocks, pitch joints on a concrete base.....	H. Gore & Co.....	September 23, 1897	(C) \$0.90 per sq. yd.
Dudley st., between Brook ave. and the N. E. R.R. crossing, paving with granite blocks on a gravel base, and regulating.....	Thomas M. Gill.....	October 11, 1897...	(D) \$0.08 per lin. ft.; (F) \$0.25 per sq. yd.; (E) \$0.18 per sq. yd.
Dudley st., between N. E. R.R. crossing and Upham's Corner, paving with granite blocks on a gravel base, and regulating.....	Doherty & Connors.....	September 15, 1897	(D) \$0.08 per lin. ft.; (F) \$0.25 per sq. yd.; (E) \$0.18 per sq. yd.
Appleton st., between Tremont and Berkeley sts., paving with granite blocks, pitch joints on a gravel base and regulating.....	Jones & Meehan.....	October 1, 1897....	(D) \$0.08 per lin. ft. (C) \$0.90 per sq. yd. (E) \$0.18 per sq. yd.
Lamartine street, between Centre and Hoffman sts., paving with granite blocks on a gravel base and regulating.....	Jones & Meehan.....	October 1, 1897....	(D) \$0.08 per lin. ft. (F) \$0.25 per sq. yd. (E) \$0.18 per sq. yd.

EXPLANATION OF LETTERS.

(A) Barring up and loading pavement. (B) Furnishing and laying a 6 in. American cement concrete base. (C) Laying granite block paving and flagging crosswalks and pitching joints. (D) Resetting edgstones. (D') Resetting edgstones, including excavation. (E) Relaying brick sidewalks. (E') Relaying brick sidewalks, including excavation. (F) Laying granite block paving and flagging crosswalks, with gravel joints. (G) Relaying brick sidewalks, herring-bone style. (H) Furnishing and laying Sicilian Rock Asphalt wearing surface and concrete base gutters.

Furnishing Filling.

CONTRACT.	Awarded to	Dated	Price.
Queensberry and Ipswich sts.	Boston and Albany R.R. Co.	September 7, 1897.	\$0.51 per cu. yd. bank measurement.
Columbia road between Mt. Vernon and Burnham sts.	Jeremiah J. Sullivan.....	January 7, 1898 ..	\$0.37 per cu. yd. bank measurement.

Furnishing and Laying Concrete Base.

CONTRACT.	Awarded to	Dated	Price.
State st., between Washington and Commercial sts.	Metropolitan Construction Company.....	June 12, 1897.....	(A) \$4.75 per cu. yd.
Winthrop sq.	Metropolitan Construction Company.....	September 23, 1897	(A) \$4.75 per cu. yd. (B) \$0.22 per sq. yd.
Congress st., between State street and Exchange pl.	Metropolitan Construction Company	October 1, 1898 ...	(A) \$5.00 per cu. yd. (B) \$0.25 per sq. yd.

EXPLANATION OF LETTERS.

(A) Furnishing and laying a 6-inch American cement concrete base.

(B) Barring up and loading pavement, including excavation.

Street Construction, under Chapter 323 of the Acts of 1891, or Special Acts or Amendments thereto.
Macadam Roads.

CONTRACT.	Awarded to	Dated	Price.
Athelwold st., between School and Kilton sts.	Collins & Ham.....	July 16, 1897.....	(A) \$258.00; (B) \$0.31; (D) \$0.07; (E) \$0.58; (G) \$1.50; (H) \$0.27; (J) \$0.20; (L) \$4.50; (N) \$0.10; (P) \$3.00.
Chamberlain st., between Harvard and Algonquin sts.	Collins & Ham.....	July 20, 1897.....	(A) \$0.07; (B) \$0.44; (D) \$0.08; (E) \$0.63; (H) \$0.19; (J) \$0.20; (L) \$1.25; (N) \$0.02; (P) \$3.00.
Wolcott st., between Columbia and Erie sts.	Collins & Ham.....	July 20, 1897.	(A) \$0.01; (B) \$0.50; (D) \$0.14; (E) \$0.18; (H) \$0.44; (J) \$0.19; (L) \$1.50; (N) \$0.01; (P) \$3.00.
Ellet st., between Adams st. and Dorchester ave. . .	H. Gore & Co.	July 20, 1897.....	(A) \$0.00; (B) \$0.39; (D) \$0.19; (E) \$0.70; (H) \$0.21; (J) \$0.18; (L) \$4.25; (N) \$0.60; (P) \$3.00.

Gaylord st., between Washington and Chamberlain sts.	Doherty & Connors.....	July 20, 1897.....	(A) \$12.00; (B) \$0.29; (D) \$0.19; (E) \$0.63; (H) \$0.23; (J) \$0.16; (L) \$4.50; (N) \$0.01; (P) \$3.00.
Fullerton st., between Brookline ave. and Fairhaven st.....	P. Doherty.....	July 23, 1897.....	(A) \$0.00; (B) \$0.30; (D) \$0.20; (E) \$0.59; (G) \$1.31; (H) \$0.21; (J) \$0.17; (L) \$4.50; (N) \$0.72; (P) \$3.00.
Norway st., between Massachusetts ave. and Parker st.....	Doherty & Connors.....	July 23, 1897.....	(A) \$0.00; (B) \$0.30; (D) \$0.20; (E) \$0.60; (G) \$1.29; (H) \$0.21; (J) \$0.18; (L) \$4.25; (N) \$0.73; (P) \$3.00.
Turner st., between Haviland and Astor sts.	Doherty & Connors.....	July 23, 1897.....	(A) \$0.00; (B) \$0.31; (D) \$0.19; (E) \$0.61; (G) \$1.32; (H) \$0.21; (J) \$0.39; (L) \$4.27; (N) \$0.75; (P) \$3.00.
Greenbrier st., between Bloomfield and Park sts.	H. Gore & Co.	September 3, 1897	(A) \$0.01; (B) \$0.35; (D) \$0.18; (E) \$0.55; (H) \$0.19; (J) \$0.14; (L) \$3.75; (N) \$0.01; (P) \$3.00.
Bloomfield st., between Geneva ave. and Greenbrier st.	Collins & Ham.....	September 3, 1897	(A) \$0.01; (B) \$0.32; (D) \$0.16; (E) \$0.56; (H) \$0.10; (J) \$0.25; (L) \$4.50; (N) \$0.01; (P) \$3.00.
Tonawanda st., between Geneva ave. and Greenbrier st.	P. Doherty.....	October 1, 1897...	(A) \$0.00; (B) \$0.25; (D) \$0.17; (E) \$0.50; (H) \$0.19; (J) \$0.14; (L) \$4.00; (N) \$0.01; (P) \$3.00.
Fairmount st., between Washington and Morton sts.	J. McGovern.....	November 1, 1897	(A) \$25.00; (B) \$0.29; (D) \$0.17; (E) \$0.33; (H) \$0.18; (J) \$0.14; (L) \$4.00; (N) \$0.48; (P) \$3.00.
Bernard st., between Harvard st. and Talbot ave	J. A. Whittmore's Sons.....	November 22, 1897	(A) \$0.00; (B) \$0.25; (D) \$0.16; (E) \$0.35; (H) \$0.18; (J) \$0.12; (L) \$3.00; (N) \$0.60; (P) \$3.00.

EXPLANATION OF LETTERS.

(A) Removing trees, etc. (B) Earth excavation, per cubic yard. (D) Macadam hauled and placed, per square yard. (E) Granite block gutters hauled and laid, per square yard. (G) Circular edgestones set, per linear foot. (H) Straight edgestones hauled and set, per linear foot. (I) Brick sidewalks furnished and laid, per square yard. (J) Crushed stone sidewalks hauled and placed, per square yard. (L) Crosswalk flagging furnished and laid, per square yard. (N) Gravel furnished, per cubic yard. (P) Catch-basin and manhole covers reset to grade.

Street Construction, under Chapter 323 of the Acts of 1891, or Special Acts or Amendments thereto.

Telford Macadam Roads.

CONTRACT.	Awarded to	Dated	Price.
Blue Hill ave., between Glenway and Canterbury sts.....	Doherty & Connors.....	June 24, 1897.....	(A) \$75.00; (B) \$0.45; (D) \$0.20; (E) \$0.20; (F) \$0.57; (G) \$0.10; (H) \$0.23; (J) \$0.16; (K ¹) \$0.61; (L) \$0.30; (M) \$0.43; (N) \$3.00.
Columbus ave., between Ritchie street and W. Walnut pk.....	Daniel E. Lynch.....	August 25, 1897...	(A) \$10; (B) \$0.28; (D) \$0.20; (E) \$0.13; (F) \$0.58; (H) \$0.21; (J) \$0.07; (K) \$4.50; (L) \$0.50; (N) \$3.00.
Columbia road, between Blue Hill ave. and Stanwood st.....	H. P. Nawn.....	September 20, 1897	(A) \$50 (B) \$0.30; (C) \$1.20; (D) \$0.15; (E) \$0.15; (F) \$0.55; (G) \$0.10; (H) \$0.20; (J) \$0.15; (K) \$4.00; (L) \$0.10; (N) \$3.00.
Ruggles st., between Parker st., and the Back Bay Fens.....	Doherty & Connors.....	October 4, 1897...	(A) \$0.01; (B) \$0.25; (D) \$0.17; (E) \$0.15; (F) \$0.55; (H) \$0.21; (J) \$0.12; (K) \$4.15; (L) \$0.61; (N) \$3.00.
Vanconver st., between Huntington ave. and Ruggles st.....	Doherty & Connors.....	October 4, 1897...	(A) \$0.61; (B) \$0.20; (D) \$0.16; (E) \$0.16; (F) \$0.55; (H) \$0.19; (J) \$0.14; (K) \$3.75; (L) \$0.65; (N) \$3.00.
Columbia road, between Stanwood st. and a point about 220 ft. north of Glendale street.....	H. P. Nawn.....	January 15, 1898..	(A) \$50.00; (B) \$0.21½; (C) \$1.50; (D) \$0.15; (E) \$0.15; (F) \$0.55; (G) \$0.10; (H) \$0.20; (J) \$0.15; (K) \$4.00; (L) \$0.05; (N) \$3.00.

EXPLANATION OF LETTERS.

(A) Removing trees, etc. (B) Earth excavation, per cubic yard. (C) Rock excavation, per cubic yard. (D) Telford base hauled and placed, per square yard. (E) Macadam hauled and placed, per square yard. (F) Granite block gutters, hauled and laid, per square yard. (G) Loam, hauled and placed, per square yard. (H) Edgestone hauled and set, per linear foot. (J) Crushed stone for sidewalks, hauled and placed, per square yard. (K) Flagging crosswalks, furnished and laid, per square yard. (K¹) Flagging crosswalks, hauled and laid, per square yard. (L) Gravel furnished, per cubic yard. (M) Six-inch drain pipe, furnished and laid, per linear foot. (N) Catch-basin and manhole covers reset to grade.

Sewer Construction, under Chapter 323 of the Acts of 1891, or Special Acts or Amendments thereto.

CONTRACT.	Awarded to	Dated	Price.
Culvert, sewer and surface-drain in Athelwold st.,	J. P. O'Connell	March 18, 1897.....	(1) \$1.50 per lin. ft. earth excavation for concrete culvert; (2) \$3.00 per cu. yd. rock excavation; (3) \$4.00 per cu. yd. American cement concrete; (4) \$5.00 per cu. yd. Portland cement concrete; (5) \$5.00 per cu. yd. brick masonry American cement mortar; (6) \$3.50 per cu. yd. rubble stone masonry; (8) \$0.60 per lin. ft. 12-in. pipe house sewer; (9) \$0.50 per lin. ft. 12-in. pipe house sewer; (10) \$0.40 per lin. ft. 6-in. pipe house drain; (11) \$0.35 per lin. ft. 18-in. pipe surface drain; (12) \$0.35 per lin. ft. 15-in. pipe surface drain; (13) \$0.35 per lin. ft. 12-in. pipe surface drain; (14) \$0.35 per lin. ft. 10-in. pipe surface drain; (15) \$30.00 each, manhole; (16) \$40.00 each, catch-basin; (17) \$13.00 each, drop inlet; (18) \$30.00 per M. ft. B. M., spruce lumber left in place.
Sewer and connections in Ellet st.....	Quimby & Ferguson.....	April 8, 1897.....	(1) \$4.00 per cu. yd. rock excavation; (2) \$0.42 per lin. ft. 10-in. pipe house sewer; (3) \$0.42 per lin. ft. 6-in. pipe house drain; (4) \$0.40 per lin. ft. 10-in. pipe catch-basin drain; (5) \$1.50 each, pipe chimney; (6) \$37.00 each, catch-basin (7) \$0.60 each, 10 x 10-in. pipe, or 10 x 6-in. Y; (8) \$1.00 each 10-in. slant.
Sewers and drains in Parker, Turner and Norway sts.....	J. P. O'Connell	April 27, 1897.....	(1) \$1.00 per lin. ft. earth excavation above grade; (2) \$0.60 per lin. ft. earth excavation below grade; (3) \$4.00 per cu. yd. brick masonry American cement mortar; (4) \$4.00 per cu. yd. brick masonry Portland cement mortar; (5) \$3.50 per cu. yd. concrete; (6) \$23.00 per M. ft. B. M. spruce lumber left in place; (7) \$15.00 per M. ft. B. M. spruce lumber for sheet piling and shoring left in place; (8) \$0.17 per lin. ft. of pile driven; (9) \$0.55 per lin. ft. 18-in. pipe house sewer; (10) \$0.60 per lin. ft. 12-in. pipe house sewer; (11) \$0.35 per lin. ft. 10-in. pipe catch-basin drain; (12) \$0.20 per lin. ft. 8-in. pipe under-drain; (14) \$0.35 per lin. ft. 6-in. pipe house drain; (17) \$18.00 each, manhole; (18) \$20 each catch-basin.

Sewer Construction, under Chapter 323 of the Acts of 1891, or Special Acts or Amendments thereto. — *Continued.*

CONTRACT.	Awarded to	Dated	Price.
Sewer in Leedsville st.	D. E. Lynch.	July 7, 1897.	(1) \$0.10 per cu. yd. earth excavation below grade; (2) \$0.01 per M. ft. B. M. spruce lumber for purposes other than sheeting and shoring and left in place; (3) \$0.01 per M. ft. B. M. spruce lumber for sheeting and shoring and left in place; (4) \$0.50 per lin. ft. 12-in. pipe house sewer; (5) \$0.15 per lin. ft. 6-in. pipe under-drain; (6) \$30.00 manholes, each; (7) \$10.00 pipe chimneys, each; (8) \$3.50 per cu. yd. rock excavation.
Sewers and drains in Bloomfield st., between Geneva ave. and Greenbrier st.	James Dolan.	July 28, 1897.	(1) \$0.17 per cu. yd. earth excavation below grade; (2) \$1.00 per M. ft. B. M. spruce lumber for purposes other than sheeting and shoring and left in place; (4) \$1.00 per M. ft. B. M. spruce lumber for sheeting and shoring and left in place; (5) \$0.39 per lin. ft. 12-in. pipe house sewer; (9) \$0.27 per lin. ft. 12-in. pipe catch-basin drain; (10) \$0.27 per lin. ft. 10-in. pipe catch-basin drain; (13) \$0.11 per lin. ft. 6-in. pipe under-drain; (15) \$0.25 per lin. ft. 6-in. pipe house drain; (19) \$38.00 manholes, each; (20) \$11.00 drop inlets each; (21) \$2.89 per cu. yd. rock excavation.
Drains in Greenbrier st., between Bloomfield and Park sts.	Quimby & Ferguson.	July 30, 1897.	(12) \$0.40 per lin. ft. 12-in. pipe catch-basin drain; (16) \$0.32 per lin. ft. 6-in. pipe house drain; (22) \$0.50 per cu. yd. gravel.
Sewers and drains in Tonawanda st., between Geneva ave. and Greenbrier st.	P. & F. E. McCarthy.	August 12, 1897.	(1) \$0.10 per cu. yd. earth excavation below grade; (8) \$0.43 per lin. ft. 12-in. pipe house sewer; (9) \$0.28 per lin. ft. 12-in. pipe catch-basin drain; (10) \$0.28 per lin. ft. 10-in. pipe catch-basin drain; (13) \$0.05 per lin. ft. 6-in. pipe under-drain; (15) \$0.30 per lin. ft. 6-in. pipe house drain; (18) \$28.00, manholes, each; (19) \$35.00, catch-basins, each; (20) \$12.00, drop-inlets, each; (21) \$3.00 per cu. yd. rock excavation.

Sewer work in Peterborough st.	Cullen Brothers	August 19, 1897...	(1) \$2.30 per lin. ft. earth excavation for brick sewers below grade; (2) \$2.30 per lin. ft. earth excavation for brick catch-basin drain; (3) \$0.85 per lin. ft. for earth excavation below grade; (4) \$0.85 per cu. yd. brick masonry, American cement mortar; (5) \$3.80 per cu. yd. brick masonry, Portland cement mortar; (6) \$4.00 per cu. yd. brick concrete; (7) \$2.00 per M. ft. B. M. spruce lumber for purposes other than sheeting and shoring and left in place; (8) \$24.00 per M. ft. B. M. spruce lumber for sheeting and shoring and left in place; (9) \$23.00 per M. ft. B. M. spruce lumber for sheeting and shoring and left in place; (10) \$2.00 per lin. ft. 18-in. pipe under-drain; (11) \$0.16 per lin. ft. 8-in. pipe under-drain; (12) \$0.15 per lin. ft. 6-in. pipe under-drain; (13) \$0.25 per spruce pile driven.
Sewers and drains in Columbia road, between Dudley st. and Edward Everett sq.	Daniel E. Lynch	September 7, 1897.	(1) \$0.50 per cu. yd. earth excavation below grade; (2) \$5.00 per cu. yd. rock excavation; (3) \$27.00 per M. ft. B. M. spruce lumber for purposes other than sheeting and shoring and left in place; (4) \$0.01 per cu. yd. spruce lumber for sheeting and shoring and left in place; (5) \$0.53 per lin. ft. 12-in. pipe house sewer; (6) \$0.43 per lin. ft. 10-in. pipe catch-basin drain; (7) \$0.43 per lin. ft. 10-in. pipe under-drain; (8) \$0.15 per lin. ft. 6-in. pipe under-drain; (9) \$1.00 each slants & Y's; (10) \$30.00, manholes, each; (11) \$39.00 catch-basins, each; (12) \$10.00, drop-inlets, each; (13) \$0.35 per cu. yd. gravel.
Culvert, sewers and drains in Elizabeth, Norfolk and Morton sts.	T. H. Connolly	September 21, 1897	(1) \$0.25 per cu. yd. earth excavation below grade; (2) \$4.00 per cu. yd. rock excavation; (3) \$1.00 per M. ft. B. M. spruce lumber for purposes other than sheeting and shoring and left in place; (4) \$20.00 per M. ft. B. M. spruce lumber for sheeting and shoring and left in place; (5) \$0.50 per lin. ft. 18-in. pipe house sewer; (6) \$0.53 per lin. ft. 12-in. pipe culvert; (7) \$1.00 per lin. ft. 18-in. pipe culvert; (8) \$0.53 per lin. ft. 12-in. pipe culvert; (9) \$1.00 per lin. ft. 18-in. pipe culvert; (10) \$1.00 per lin. ft. 12-in. pipe culvert; (11) \$0.25 per lin. ft. 15, 12 and 10-in. pipe catch-basin drain; (12) \$0.10 per lin. ft. 6-in. pipe under-drain; (13) \$0.35 per lin. ft. 6-in. pipe under-drain; (14) \$1.00 each Y's; (15) \$45.00, manholes, each; (16) \$45.00, catch-basins, each; (17) \$10.00, drop-inlets, each; (18) \$0.50 per cu. yd. gravel.

Sewer Construction, under Chapter 323 of the Acts of 1891, or Special Acts or Amendments thereto. — *Continued.*

CONTRACT.	Awarded to	Dated	Price.
Culvert, sewers and drains, Burt st., between Ashmont and Washington sts.	J. P. O'Connell	September 8, 1897.	(2) \$4.00 per cu. yd. rock excavation; (3) \$4.00 per cu. yd. Portland cement concrete; (6) \$0.50 per lin. ft. earth excavation for stone culvert; (7) \$0.43 per lin. ft. 15-in. pipe house sewer; (8) \$0.43 per lin. ft. 12-in. pipe house sewer; (10 and 11) \$0.25 per lin. ft. 12 and 10-in. pipe catch-basin drain; (14 and 17) \$0.30 per lin. ft. 6-in. pipe under-drain and house-drain; (18) \$1.00 each slant; (19) \$30.00, manholes, each; (20) \$40.00, catch-basins, each; (21) \$10.00, drop inlets, each; (23) \$14.00 per cu. yd. brick masonry, American cement mortar; (24) \$3.50 per cu. yd. rubble masonry; (25) \$1.00 per sq. yd. rubble paving; (26) \$7.00 per cu. yd. covering stones.
Culvert, sewers and drains, Fairmount st.	P. & F. E. McCarthy	September 28, 1897	(1) \$0.01 per lin. ft. earth excavation below grade; (2) \$2.50 per cu. yd. rock excavation; (3) \$1.50 per cu. yd. concrete; (4) \$0.01 per M. ft. B. M. spruce lumber for purposes other than sheeting and shoring and left in place; (5) \$0.01 per M. ft. B. M. spruce lumber for sheeting and shoring and left in place; (7 and 8) \$0.15 per lin. ft. 24 and 18-in. pipe culvert; (9) \$0.36 per lin. ft. 12-in. pipe house sewer; (10) \$0.25 per lin. ft. 18-in. pipe catch-basin drain; (11) \$0.23 per lin. ft. 15-in. pipe catch-basin drain; (12) \$0.20 per lin. ft. 12-in. pipe catch-basin drain; (13) \$0.15 per lin. ft. 10-in. pipe catch-basin drain; (14) \$0.06 per lin. ft. 6-in. pipe under-drain; (16) \$5.00 per cu. yd. rubble masonry; (17) \$0.20 per lin. ft. 6-in. house-drain; (19) \$28.00, manholes, each; (20) \$43.00, catch-basins, each; (21) \$14.00, drop-inlets, each; (23) \$0.10 per cu. yd. gravel.
Culvert, sewers and drains, Leroy st.	James Dolan	October 13, 1897...	(1) \$0.18 per cu. yd. earth excavation below grade; (2) \$3.00 per cu. yd. rock excavation; (3) \$3.50 per cu. yd. concrete; (4) \$1.00 per M. ft. B. M. spruce lumber for purposes other than sheeting and shoring and left in place; (5) \$1.00 per M. ft. B. M. spruce lumber for sheeting and shoring and left in place; (6) \$5.00 per

Sewers and drains, Belmore terrace.....	James Dolan.....	October 13, 1897..	cu. yd. brick masonry; (8 and 9) \$0.36 per lin. ft. 12 and 10-in. pipe house sewer; (10) \$4.25 per cu. yd. rubble masonry; (12) \$0.22 per lin. ft. 12-in. pipe catch-basin drain; (13) \$0.24 per lin. ft. 10-in. pipe catch-basin drain; (14) \$0.16 per lin. ft. 6-in. pipe under-drain; (15) \$0.70 per lin. ft. earth excavation for concrete culvert; (17) \$0.30 per lin. ft. 6-in. pipe house-drain; (18) \$1.00, each, Y's; (19) \$25.00, manholes, each; (20) \$35.00, catch-basins, each; (21) \$4.00, drop-inlets, each; (22) \$0.50 per cu. yd. gravel.
Sewers and drains, Malvern st.	Quinby & Ferguson.....	October 9, 1897...	(1) \$2.00 per cu. yd. rock excavation; (2) \$6.00 per lin. ft. 10-in pipe catch-basin drain; (3) \$1.25 per lin. ft. 6-in house-drain; (5) \$30.00, catch-basins, each.
Culvert, sewers and drains in Bernard st.	Collins & Ham.....	October 20, 1897..	(4) \$0.42 per lin. ft. 12-in pipe house sewer; (5 and 6) \$0.30 per lin. ft. 10-in. pipe house sewer and 10-in. catch-basin drain; (7) \$0.30 per lin. ft. 6-in. pipe house-drain; (9) \$27.00, manholes, each; (10) \$35.00, catch-basins, each. (1) \$0.40 per cu. yd. earth excavation below grade; (2) \$1.00 per cu. yd. rock excavation; (3) \$4.75 per cu. yd. concrete; (4) \$20.00 per M. ft. B. M. spruce lumber for purposes other than sheeting and shoring and left in place; (5) \$10.75 per cu. yd. brick masonry; (7 and 8) \$0.60 per lin. ft. 30 and 24-in catch-basin drain; (9, 10 and 11) \$0.40 per lin. ft. 24, 18 and 15-in. pipe catch-basin drain; (12) \$0.35 per lin. ft. 12-in. pipe catch-basin drain; (13) \$0.30 per lin. ft. 10-in pipe catch-basin drain; (14) \$0.10 per lin. ft. 6-in. pipe under-drain; (15) \$4.00 per cu. yd. rubble masonry; (17) \$0.26 per lin. ft. 6-in house-drain; (18) \$1.00, each, slant; (19) \$30.00, manholes, each; (20) \$33.00, catch-basins, each; (21) \$12.00, drop-inlets, each; (23) \$0.50 per cu. yd. gravel; (24) \$3.00 per lin. ft. earth excavation for concrete culvert.
Sewers and drains, Rosseter st., between Bullard st. and Bowdoin ave. and outlet.....	T. F. Broderick.....	October 28, 1891..	(2) \$2.00 per cu. yd. rock excavation; (7) \$0.50 per lin. ft. 12-in. pipe house sewer; (10) \$0.50 per lin. ft. 13-in. pipe catch-basin drain; (11) \$0.40 per lin. ft. 15-in pipe catch-basin drain; (12) \$0.30 per lin. ft. 12-in. pipe catch-basin drain; (13) \$0.25 per lin. ft. 10-in. pipe catch-basin drain; (17) \$0.18 per lin. ft. 6-in. pipe house-drain; (19) \$30.00, manholes, each; (20) \$30.00, catch-basins, each; (21) \$12.00, drop-inlets, each.

Sewer Construction, under Chapter 323 of the Acts of 1891, or Special Acts or Amendments thereto. — Concluded.

CONTRACT.	Awarded to	Dated	Price.
Sewers and drains, Oakley st., between Geneva ave. and Bowdoin st.	Daniel M. Dwyer.	November 9, 1897,	(2) \$4.00 per cu. yd. rock excavation; (7) \$0.20 per lin. ft. 12-in. pipe house sewer; (10 and 12) \$0.15 per lin. ft. 15 and 10-in. pipe catch-basin drain; (11) \$0.25 per lin. ft. 12-in. pipe catch-basin drain; (17) \$0.20 per lin. ft. 6-in. pipe house-drain; (18) \$3.00, each, slants; (19) \$38.00, manholes, each; (20) \$40.00, catch-basin, each; (21) \$15.00, drop-inlets, each.

Sewer Construction under the General Law, Chapter 402 of the Acts of 1892.

CONTRACT.	Awarded to	Dated	Price.
Sewer and manholes in Grampian way	J. P. O'Connell	April 17, 1897.	(1) \$0.50 per lin. ft. 12-in. pipe sewer; (2) \$3.80 per cu. yd. rock excavation; (3) \$30.00 each, manholes.
Sewers and drains in Bothnia st., Boylston st. and City Proper	Quimby & Ferguson.	June 29, 1897.	(1) \$1.00 per cu. yd. earth excavation below grade; (2) \$4.50 per cu. yd. concrete; (3) \$30.00 per M. ft. B. M. other than sheeting and shoring and left in place; (4) \$16.00 per M. ft. B. M. spruce lumber for sheeting and shoring and left in place; (5) \$2.50 per lin. ft. 12-in. pipe house sewer; (6) \$0.16 per lin. ft. 6-in. pipe under-drains; (7) \$65.00, manholes, each; (8) \$5.00 per cubic yard rock excavation; (9) \$0.50 per cu. yd. gravel furnished.
Sewers and drains in Bryant st., Roxbury	Thomas F. Broderick.	June 29, 1897.	(1) \$0.30 per cu. yd. earth excavation below grade; (2) \$0.40 per cu. yd. concrete; (3) \$16.90 per M. ft. B. M. spruce lumber for sheeting and shoring and left in place; (4) \$16.90 per M. ft. B. M. spruce lumber for purposes other than sheeting and shoring and left

Sewers and drains in Wabeno st.....	J. P. O'Connell	June 29, 1897.....	in place; (5) \$0.58 per lin. ft. 12-in. pipe house sewer; (6) \$0.41 per lin. ft. 10-in. catch-basin drain; (8) \$39.75, manholes, each; (9) \$38.75, catch-basins, each; (10) \$5.00 per cu. yd. rock excavation; (11) \$0.90 per cu. yd. gravel.
Sewer and connections in River, Fremont and Norfolk sts.....	J. P. O'Connell	June 29, 1897	(1) \$3.30 per lin. ft. 12-in. pipe house sewer; (3) \$30.00, manholes, each; (4) \$0.10 per cu. yd. rock excavation. (1) \$0.10 per cu. yd. earth excavation below grade; (2) \$1.00 per M. ft. B. M. spruce lumber for purposes other than sheeting and shoring and left in place; (3) \$1.00 per M. ft. B. M. spruce lumber for sheeting and shoring and left in place; (4) \$0.35 per lin. ft. 12-in. pipe house sewer; (5) \$0.55 per lin. ft. 15-in. pipe house sewer; (6) \$0.05 per lin. ft. 6-in. pipe under-drain; (7) \$30.00, manholes, each; (8) \$3.50 per cu. yd. rock excavation.
Sewer in Washington st., from Miller's lane to a summit near Grant pl., Dorchester.....	P. & F. E. McCarthy.....	July 2, 1897	(1) \$0.05 per cu. yd. earth excavation below grade; (2) \$0.50 per M. ft. B. M. spruce lumber for sheeting and shoring and left in place; (3) \$0.50 per lin. ft. 12-in. pipe house sewer; (4) \$0.05 per lin. ft. 6-in. pipe under-drain; (5) \$32.00, manholes, each; (6) \$3.49 per cu. yd. rock excavation.
Sewer in Robinson st.	J. P. O'Connell.....	July 2, 1897.....	(1) \$0.10 per cu. yd. earth excavation below grade; (4) \$0.60 per lin. ft. 12-in. pipe house sewer; (5) \$0.10 per lin. ft. 6-in. pipe under-drain; (6) \$30.00, manholes, each; (7) \$3.00 per cu. yd. rock excavation.
Sewer in Washington st. from Dorchester trunk sewer to Sunford st., Dorchester	D. M. Dwyer.....	July 8, 1897.....	(3) \$0.20 per lin. ft. 12-in. pipe house sewer; (5) \$30.00, manholes, each; (6) \$3.30 per cu. yd. rock excavation.
Sewer in Ashley ave.	J. P. O'Connell	July 7, 1897.....	(1) \$2.50 per lin. ft. earth excavation; (2) \$0.10 per lin. ft. earth excavation below grade; (3) \$4.75 per cu. yd. brick masonry, American cement; (4) \$4.75 per cu. yd. brick masonry, Portland cement; (5) \$4.00 per cu. yd. concrete in place; (6) \$25.00 per M. ft. B. M. spruce lumber for purposes other than sheeting and shoring and left in place; (7) \$0.10 per M. ft. B. M. spruce lumber for sheeting and shoring and left in place; (8) \$0.15 per lin. ft. 8-in. pipe under-drain; (11) \$0.10 per cu. yd. gravel.

Sewer Construction under the General Law, Chapter 402 of the Acts of 1892. — *Continued.*

CONTRACT.	Awarded to	Dated	Price.
Sewers in Coffey st. and private land and Ashmont st.	Quimby & Ferguson	August 12, 1897....	(1) \$0.10 per cu. yd. earth excavation; (2) \$1.00 per cu. yd. concrete; (3) \$5.00 per M. ft. B. M. spruce lumber for purposes other than sheeting and shoring and left in place; (4) \$1.00 per M. ft. B. M. spruce lumber for sheeting and shoring and left in place; (5) \$0.02 per lin. ft. spruce piles driven; (6) \$1.588 per lin. ft. 15-in. pipe house sewer; (7) \$1.588 per lin. ft. 12-in. pipe house sewer; (13) \$0.01 per lin. ft. 6-in. pipe under-drain; (18) \$27.00, manholes, each; (19) \$2.50, pipe chimneys, each; (22) \$0.50 per cu. yd. gravel.
Sewers and drains, Berwick road, Brighton.....	T. J. Young & Co.....	August 2, 1897....	(2) \$4.00 per cu. yd. rock excavation; (7) \$1.85 per lin. ft. 12-in. pipe house sewer, including manholes.
Sewers and drains, Walnut ave., Roxbury.....	James Dolan.....	August 16, 1897....	(2) \$3.18 per cu. yd. rock excavation; (7) \$0.57 per lin. ft. 12-in. pipe house sewer; (19) \$37.00, manholes, each.
Catch-basin drains, St. Botolph and Irvington sts...	James Dolan.....	August 16, 1897....	(1) \$0.30 per cu. yd. earth excavation below grade; (2) \$5.00 per cu. yd. rock excavation; (3) \$4.25 per cu. yd. concrete; (4) \$30.00 per M. ft. B. M. spruce lumber for purposes other than sheeting and shoring and left in place; (5) \$0.01 per M. ft. B. M. spruce lumber for sheeting and shoring and left in place; (10) \$0.43 per lin. ft. 18-in. pipe catch-basin drain; (16) \$25.00, manholes, each; (22) \$0.50 per cu. yd. gravel.
Sewer work in Columbus ave. West Roxbury low level sewer.....	J. P. O'Connell.....	August 25, 1897....	(1) \$2.00 per lin. ft. earth excavation; (2 and 3) \$4.25 per cu. yd. brick masonry, American and Portland cement mortar; (4) \$3.50 per cu. yd. rubble stone masonry; (6) \$0.20 per lin. ft. 8-in. pipe under-drain; (8) \$4.50 per cu. yd. rock excavation; (9) \$0.10 per cu. yd. gravel.
Sewer in Atlantic ave., South Market st. and Commercial Wharf.....	D. M. Dwyer.....	September 1, 1897,	(2) \$5.00 per cu. yd. rock excavation; (7 and 8) \$4.50 per lin. ft. 12 and 15-in. pipe house sewer, including manholes, etc.

Sewer in Fourth st., South Boston.....	Daniel M. Dwyer.....	September 18, 1897	(1) \$0.01 per cu. yd. rock excavation; (2) \$0.85 per lin. ft. 15-in. pipe house sewer; (14) \$0.20 per lin. ft. 6-in. pipe under-drains; (3) \$30.00, manholes, each.
Sewer and drains in Sawyer ave.	James Dolan.....	August 23, 1897...	(2) \$5.00 per cu. yd. rock excavation; (7) \$2.25 per lin. ft. 12-in. pipe house sewer; (19) \$48.00, manholes, each.
Sewer in Walpole st., between Tremont st. and Columbus ave.	Quimby & Ferguson.....	September 28, 1897	(2) \$5.00 per cu. yd. rock excavation; (7) \$0.80 per lin. ft. 18-in. pipe house sewer; (19) \$29.00, manholes, each.
Sewers and drains, Elmo and Greenwood sts.	Quimby & Ferguson.....	.....	(2) \$3.00 per cu. yd. rock excavation; (7) \$0.60 per lin. ft. 12-in. pipe house sewer; (19) \$28.00, manholes, each.
Sewer in Parker Hill ave., Parker and Calumet sts.	James Dolan.....	.....	(2) \$5.00 per cu. yd. rock excavation; (5) \$13.00 per M. ft. B. M. spruce lumber for sheeting and shoring and left in place; (7) \$1.12 per lin. ft. 12-in. pipe house sewer; (19) \$50.00, manholes, each.
Sewer work in H st.	Michele Russo.....	October 21, 1897..	(1) \$1.75 per lin. ft. earth excavation, above grade; (2) \$0.50 per cu. yd. earth excavation, below grade; (3) \$7.00 per cu. yd. brick masonry. American cement mortar; (4) \$9.00 per cu. yd. brick masonry, Portland cement mortar; (5) \$4.00 per cu. yd. concrete; (6) \$28.00 per M. ft. B. M. spruce lumber for purposes other than sheeting and shoring and left in place; (7) \$13.00 per M. ft. B. M. spruce lumber for sheeting and shoring and left in place; (8) \$0.01 per lin. ft. 8-in pipe under-drain.
Sewers and drains, Chapman ave., between Lyons and Tucker sts.	T. H. Connolly.....	October 27, 1897...	(1) \$0.01 per cu. yd. earth excavation, below grade. (2) \$3.00 per cu. yd. rock excavation; (4) \$1.00 per M. ft. B. M. spruce lumber for purposes other than sheeting and shoring and left in place; (5) \$1.00 per M. ft. B. M. spruce lumber for sheeting and shoring and left in place; (7) \$0.40 per lin. ft. 12-in. pipe house sewer; (14) \$0.15 per lin. ft. 6-in. pipe under-drain; (19) \$30.00, manholes, each.
Sewer in Ellingwood st.	J. P. O'Connell.....	October 25, 1897..	(3) \$3.00 per cu. yd. concrete; (7) \$1.75 per lin. ft. 15-in. pipe house sewer; (17) \$40.10, pipe chimney's, each; (19) \$40, manholes, each.
Sewers and drains in Birch st.	P. McKeown.....	November 1, 1897,	(1) \$2 per cu. yd. rock excavations; (7) \$0.45 per lin. ft. 12-in. pipe house sewer; (14) \$0.08 per lin. ft. 6-in. pipe under-drain; (19) \$23, manholes, each.

Sewer Construction under the General Law, Chapter 402 of the Acts of 1892. — *Continued.*

CONTRACT.	Awarded to	Dated	Price.
Sewer work in Charles and Allen sts.	Daniel E. Lynch.	October 13, 1897. . .	(1) \$1.57 per lin. ft. earth excavation above grade; (2) \$0.80 per cu. yd. earth excavation below grade; (3) \$4.90 per cu. yd. brick masonry, American cement mortar; (4) \$7.00 per cu. yd. brick masonry, Portland cement mortar; (5) \$4.25 per cu. yd. concrete; (6) \$80 per M. ft. B. M. spruce lumber for purposes other than sheeting and shoring and left in place; (8) \$1.40 per lin. ft. 18-in. pipe house sewer; (9) \$0.15 per lin. ft. 8-in. pipe under-drain; (12) \$3.00 per spruce pile driven; (13) \$2.00 per cu. yd. gravel.
Sewers and drains in Oak terrace and outlet.	D. Flynn.	November 8, 1897. . .	(2) \$2.00 per cu. yd. rock excavation; (5) \$5.00 per M. ft. B. M. spruce lumber for sheeting and shoring and left in place; (7) \$0.50 per lin. ft. 12-in. pipe house sewer; (14) \$0.05 per lin. ft. 6-in. pipe under-drain; (19) \$27.00, manholes, each.
Sewers and drains in Shelton st.	D. E. Lynch.	October 4, 1897.	(2) \$5.00 per cu. yd. rock excavation; (7) \$1.25 per lin. ft. 12-in. pipe house sewer; (19) \$50.00, manholes, each.
Sewers and drains, Commonwealth ave.	T. J. Young & Co.	November 13, 1897. . .	(1) \$4.00 per cu. yd. rock excavation; (2) \$7.25 per lin. ft. 30 in. pipe culvert; (19) \$35.00, manholes, each.
Sewer in Nelson st.	D. M. Dwyer.	November 13, 1897. . .	(2) \$4.50 per cu. yd. rock excavation; (7) \$1.25 per lin. ft. 12-in. pipe house sewer; (19) \$40, manholes, each.
Sewer and drains in Webster st.	T. J. Young & Co.	November 15, 1897. . .	(1) \$5.00 per cu. yd. rock excavation; (2) \$2.00 per lin. ft. 12-in. pipe house sewer, including manholes.
Sewer in Mozart st.	James Dolan.	November 15, 1897. . .	(2) \$5.00 per cu. yd. rock excavation; (4) \$12.00 per M. ft. B. M. spruce lumber for purposes other than sheeting and shoring and left in place; (5) \$12 per M. ft. B. M. spruce lumber for sheeting; (7) \$1.85 per lin. ft. 12-in. pipe house sewer; (19) \$40.00, manholes, each.
Sewer in Evans st., between Capen st. and Stanton ave.	D. M. Dwyer.	November 19, 1897. . .	(1) \$0.50 per cu. yd. earth excavation below grade; (2) \$4.50 per cu. yd. rock excavation; (5) \$12.00 per M. ft. B. M. spruce lumber for sheeting and shoring and

Sewers and drains, Bremen st.	W. H. Sias.	November 20, 1897,	left in place; (7) \$1.20 per lin. ft. 12-in. pipe house sewer; (14) \$0.20 per lin. ft. 6-in. pipe under-drain; (18) \$20.00, lamp-holes, each; (19) \$40.00, manholes, each; (22) \$0.80 per cu. yd. gravel.
Sewer in Hutchins ave.	T. H. Connolly.	November 22, 1897,	(1) \$2.00 per cu. yd. earth excavation below grade; (2) \$5.00 per cu. yd. rock excavation; (3) \$12.00 per M. ft. B. M. spruce lumber for sheeting and shoring and left in place; (4) \$1.25 per lin. ft. 12-in. pipe-house sewer; (5) \$0.20 per lin. ft. 6-in. pipe under-drain; (6) \$40.00, manholes, each.
Sewer in Mountain ave. and outlet in Dumas sts. .	James Dolan.	November 24, 1897,	(5) \$13.00 per M. ft. B. M. spruce lumber for sheeting and shoring and left in place; (7) \$2.75 per lin. ft. 12-in. pipe-house sewer; (19) \$50.00, manholes, each.
Sewers and drains, Wordsworth st., between Saratoga and Fope sts.	W. H. Sias.	November 29, 1897,	(1) \$0.10 per cu. yd. earth excavation below grade; (2) \$2.50 per cu. yd. rock excavation; (4) \$1.00 per M. ft. B. M. spruce lumber for purposes other than sheeting and shoring and left in place; (5) \$1.00 per M. ft. B. M. spruce lumber for sheeting and shoring and left in place; (7) \$0.55 per lin. ft. 12-in. pipe house sewer; (14) \$0.10 per lin. ft. 6-in. pipe under-drain; (19) \$28.00, manholes, each; (22) \$0.10 per cu. yd. gravel.
Sewer and drains in Evans st., between Morton st. and existing sewer.	J. P. O'Connell.	November 29, 1897,	(1) \$5.00 per cu. yd. rock excavation; (2) \$13.00 per M. ft. B. M. spruce lumber for sheeting and shoring and left in place; (3) \$1.50 per lin. ft. 15-in. pipe-house sewer; (5) \$40.00, manholes, each.
Sewers in private land, between Commonwealth ave. and Chiswick road, Brighton.	T. J. Young & Co.	December 2, 1897..	(2) \$4.50 per cu. yd. rock excavation; (6) \$1.50 per lin. ft. 12-in. pipe-house sewer; (19) \$40.00, manholes, each.
Sewer in Stanwood st., between Normandy st. and Columbia road.	H. P. Nawn.	December 6, 1897..	(1) \$5.00 per cu. yd. rock excavation; (2) \$2.00 per lin. ft. 24-in. pipe catch-basin drain; (3) \$35.00, manholes, each.
Sewer in Strathmore road, between Commonwealth ave. and Chestnut Hill ave.	T. J. Young & Co.	December 9, 1897,	(2) \$4.50 per cu. yd. rock excavation; (6) \$1.50 per lin. ft. 12-in. pipe-house sewer; (19) \$35.00, manholes, each.
			(2) \$4.50 per cu. yd. rock excavation; (3) \$1.25 per lin. ft. 12-in. pipe house sewer; (5) \$45.00, manholes, each.

Sewer Construction under the General Law, Chapter 402 of the Acts of 1892. — *Concluded.*

CONTRACT.	Awarded to	Dated	Price.
Sewer in Commonwealth ave., between Sidlaw and Stratmore roads.....	T. J. Young & Co.....	December 9, 1897.	(2) \$4.50 per cu. yd. rock excavation; (3) \$1.00 per lin. ft. 12-in. pipe house sewer; (5) \$45.00, manholes, each.
Sewer and drains in Evans st., between Nelson st. and summit, Dorchester.....	J. P. O'Connell.....	December 11, 1897	(2) \$4.50 per cu. yd. rock excavation; (8) \$1.50 per lin. ft. 12-in. pipe house sewer; (19) \$40.00, manholes, each.
Sewer in Woodside ave., West Roxbury.....	James Dolan.....	December 16, 1897	(1) \$5.00 per cu. yd. rock excavation; (2) \$13.00 per M. ft. B. M. spruce lumber for sheeting and shoring, and left in place; (3) \$1.25 per lin. ft. 12-in. pipe house sewer; (5) \$37.00, manholes, each.
Sewer in Wordsworth st.....	W. H. Sias.....	December 16, 1897	(1) \$5.00 per cu. yd. rock excavation; (2) \$13.00 per M. ft. B. M. spruce lumber for sheeting and shoring, and left in place; (3 and 4) \$1.50 per lin. ft. 15 and 12 in. pipe house sewer; (6) \$40.00, manholes, each.
Sewer in Fuller st., between passageway and Morton st.....	D. Flynn.....	December 17, 1897	(2) \$5.00 per cu. yd. rock excavation; (6) \$1.00 per lin. ft. 12-in. pipe house sewer; (15) \$0.30 per lin. ft. 6-in. pipe under-drain; (19) \$40.00, manholes, each.
Sewers and drains in Stanwood st., between Normandy st. and Blue Hill ave.....	H. P. Nawn.....	December 21, 1897	(2) \$4.50 per cu. yd. rock excavation; (6) \$1.50 per lin. ft. 12-in. pipe house sewer; (19) \$35.00, manholes, each.
Building Dorchester ave. sewer outlet.....	Miller & Ellis.....	December 10, 1897	\$1,800.

Altering the Course of Stony Brook, Chapter 530 of the Acts of 1895.

CONTRACT.	Awarded to	Date	Price.
Building a brick conduit for Stony Brook in three sections in Columbus ave. and land of the city of Boston	H. P. Nawn.....	April 26, 1897.....	(1) \$1.00 per cu. yd. earth excavation in open trench above grade; (2) \$2.75 per cu. yd. earth excavation in tunnel above grade; (3) \$0.80 per cu. yd. earth excavation below grade; (4) \$2.50 per cu. yd. rock excavation in open trench; (5) \$3.50 per cu. yd. rock excavation in tunnel; (6) \$5.00 per cu. yd. concrete in open trench; (7) \$7.00 per cu. yd. concrete in tunnel; (8) \$7.00 per cu. yd. brick masonry, American cement mortar; (9) \$7.00 per cu. yd. brick masonry, Portland cement mortar; (10) \$0.50 per lin. ft. 10-in. pipe under-drain; (11) \$12.00 per M. ft. B. M. spruce lumber for sheeting and shoring, and left in place; (12) \$0.50 per cu. yd. gravel furnished.
Building a brick conduit for Stony Brook at the intersection of Columbus ave. and Centre st.	J. P. O'Connell	May 25, 1897	(1) \$1.55 per cu. yd. earth excavation above grade; (2) \$0.80 per cu. yd. earth excavation below grade; (3) \$2.50 per cu. yd. rock excavation; (4) \$5.00 per cu. yd. concrete; (5) \$6.00 per cu. yd. brick masonry; (6) \$37.00 per M. ft. B. M. tongued and grooved sheeting left in place; (7) \$0.50 per lin. ft. 10-in. pipe under-drain; (8) \$16.00 per M. ft. B. M. spruce lumber for sheeting and shoring, left in place; (9) \$5.00 per M. ft. B. M. matched boards used in lining the temporary flume; (10) \$0.50 per cu. yd. gravel furnished.

Altering the Course of Stony Brook, Chapter 530 of the Acts of 1895. — Concluded.

CONTRACT.	Awarded to	Dated	Price.
Building about 117 lin. ft. of Stony Brook conduit in private land and land of the City of Boston, Roxbury, Mass.	J. P. O'Connell	October 21, 1897...	(1) \$2.80 per cu. yd. earth excavation; (2) \$4.50 per cu. yd. rock excavation; (3) \$6.00 per cu. yd. concrete; (4) \$4.50 per cu. yd. rubble masonry; (5) \$7.00 per cu. yd. brick masonry; (6) \$4.00 per lin. ft. 40-in. cast-iron pipe; (7) \$16.00 per M. ft. B. M. spruce lumber for sheeting and shoring, left in place; (8) \$16.00 per M. ft. B. M. spruce lumber for purposes other than sheeting and shoring and left in place; (9) \$100.00 building dam; (10) draining, its actual reasonable cost as determined by the superintendent, plus 15%; (11) \$0.50 per lin. ft. pipe 8-in. under-drain.
Completing, temporarily, the forebay of the new Stony Brook gate-house	H. P. Nawn	September 29, 1897	(1) \$1.00 per cu. yd. earth excavation; (2) \$6.00 per cu. yd. rock excavation in tunnel; (3) \$3.50 per cu. yd. rubble masonry, laid in the retaining-wall in north side of the excavation for new forebay; (4) \$7.00 per cu. yd. brick masonry.
Building rubble stone wall below grade 9.5 Stony Brook gate-house forebay	H. P. Nawn	September 3, 1897,	(1) \$5.00 per cu. yd. rubble masonry.
Furnishing range stone for Stony Brook gate-house	Austin Ford & Son	October 13, 1897...	(1) \$10.85 per cu. yd.
Laying range stone in Stony Brook gate-house above grade 9.5	H. P. Nawn	October 13, 1897...	\$6.00 per cu. yd.

Building Ferry-boat, Ferry-drops, Tanks, etc.

CONTRACT.	Awarded to	Dated	Price.
Plans, specifications, estimates, superintendence of construction, etc. for ferry-boat.....	R. F. Keough.....	February 16, 1897.	Five (5) per cent. of the total cost of the boat.
Building ferry-drop for the South Ferry, East Boston side.....	J. M. Brooks.....	September 22, 1897	\$5,433.50.
Building a tank for the South Ferry, East Boston side.....	J. M. Brooks.....	September 22, 1897	\$1,737.50.
Building a double-screw ferry-boat.....	W. McKie	October 1, 1897...	\$61,000, the city to do the electric wiring and install plant.

Pile Driving.

CONTRACT.	Awarded to	Dated	Price.
Summer st., between Cove st. and Fort Point channel.....	W. H. Sias.....	June 26, 1897.....	(1) \$0.12 per lin. ft. by daylight; (2) \$0.12 per lin. ft. at night.
Harrison ave., between Massachusetts ave. and Eustis st.....	W. H. Sias....	July 1, 1897.....	(1) \$0.11½ per lin. ft. by daylight; (2) \$0.11½ per lin. ft. at night.
Neponset ave. and Tolman st.....	D. M. Dwyer.....	October 1, 1897...	(1) \$2.65 per pile not more than 25 ft. long.
Kneeland st., between Federal st. and the O. C. R.R. station	W. S. Rendle.....	November 28, 1897.	(1) \$0.11 per lin. ft.

Reservoir Extension.

CONTRACT.	Awarded to	Dated	Price.
Building extension to Moon Island reservoir and a flushing sewer, and filling cove.....	Perkins, White & Co.....	October 27, 1897 ..	(1) (A) \$0.60 per cu. yd. earth excavation below grade, \$7.75 for walls; (B) \$0.70 per cu. yd. earth excavation for flushing sewer; (C) \$0.35 per cu. yd. earth excavation for other purposes; (D) \$2.00 per cu. yd. rock excavation. (2) \$1.75 per cu. yd. ballast in place. (3) \$1.20 per ton rip-rap deposited. (4) (A and B) \$4.00 per cu. yd. American and Portland cement concrete. (5) (A) \$10.00 per cu. yd. brick masonry, Portland cement mortar; (B) \$9.80 per cu. yd. brick masonry, American cement mortar. (6) (A, B and C) \$3.80 per cu. yd. rubble masonry, American and Portland cement mortar. (7) \$2.50 per cu. yd. dimension stone masonry laid. (8) \$2.00 per pier stone set. (9) (A) \$0.15 per lin. ft. 10-inch drain pipe; (B) \$0.20 per lin. ft. 15-inch drain pipe. (10) (A) \$4.00 per M. ft. B. M. tongued and grooved sheet piling for permanent use; (B) \$24.00 per M. ft. B. M. spruce lumber laid for permanent use for purposes other than sheet piling.

Miscellaneous Agreements.

CONTRACT.	Awarded to	Dated	Price.
License to use twenty-four street-sweeping machines and to manufacture additional machines..	Aaron Stackpole, Jr.	February 1, 1897..	\$600.00 per year for the use of; \$24.00, each, as license to manufacture.
Furnishing two G. E. 25-horse power special motors and installing complete, ready for use, at the South Ferry, Boston side.....	Lockwood Manufacturing Co.	July 6, 1897.....	\$1,970.00.
Furnishing one G. E. 25-horse power special motor and installing complete, ready for use, at the South Ferry, East Boston side.....	Lockwood Manufacturing Co.	October 4, 1897....	\$1,100.00.
Refilling street-sweeping machine brooms with best American rattan.....	Heywood Bros. and Wakefield Co.....	September 20, 1879	\$15.00, per broom.
Artificial stone retaining-walls, steps and plat-forms, cast-iron fences, hand rails and castings.	W. A. Murtfeldt Co.....	September 2, 1897,	\$4,000.00.
Repairs on the two high-duty pumping engines, Calf Pasture pumping station.....	Lockwood Manufacturing Co.	October 6, 1897...	\$12,450.00.
Building Talbot-avenue bridge for the tracks of the New England Railroad Co.....	New England Railroad Co...	October 30, 1897..	A sum not to exceed \$25,000.00.
Erecting two air pumps for the Calf Pasture pumping-station.....	I. P. Morris Co.....	December 9, 1897,	\$4,975.00.
Plans, specifications, estimates and superintendence, etc., for a 72,000-gallons pump for the Calf Pasture pumping station.....	E. D. Leavitt.....	December 14, 1897,	\$7,500.00; \$0.94 per hour for draughtsman's time, including materials, etc.

List of Streets Paved with Trinidad Asphalt.

City Proper.

Name.	Location.	Length.	Area.	Year Laid.
Albany st.	East Concord st. to East Springfield st...	450	2,700	1884
Arch st.	Franklin st. to Milk st.	426	1,267	1883-93
Ash st.	Bennet st. to Nassau.....	230	409	1887
Barton ct.....	Brighton st. to Barton st.....	134	186	1894
Batterymarch st...	Milk st. to Kilby st.....	260	857	1881-96
Beacon st.....	Charles st., across Arlington st.....	870	3,800	1891
Beacon st.....	Dartmouth st. to within 150 ft. of westerly line of Gloucester st.....	1,744	9,277	1892
Beacon st.	68 ft. west of Gloucester st. to Massachusetts ave.....	1,019	5,391	1893
Bennet st.....	90 ft. west of Harrison ave. to 162 ft. east of Washington st.....	180	300	1887
Bond st.....	Hanson st. to Milford st.	192	426	1895
Boylston st.....	Easterly side of Berkeley st., across Clarendon st.	656	3,869	1897
Brattle sq.	Brattle st. to Elm st.	281	670	1888
Brighton st.....	Leverett st. to Allen st.....	845	1,737	1892
Brimmer st.....	Beacon st. to Pinckney st.....	1,087	3,300	1895
Central st.....	Broad st. to Kilby st.	313	869	1887
Chambers st.....	Green st., across Poplar st.....	460	1,061	1894
Chambers st.....	Brighton st. to Charles st.	272	604	1895
Charter st.	Hanover st., across Unity st.	318	636	1894
Cherry st.....	Washington st. to Shawmut ave.....	334	594	1892
Clark st.....	Hanover st., toward North st.	319	603	1892
Columbus ave.	Boston & Albany Railroad bridge, } across Massachusetts ave.....	3,505	15,578	1884-87 1888-91
Columbus ave.	Massachusetts ave. to 301 ft. south of Camden st.....	903	5,418	1896
Corning st.....	Washington st. to Shawmut ave.	338	794	1896
Congress sq.	Between Devonshire st. and Congress st.	19	37	1883
Cooper st.....	North Margin st., across Endicott st...	194	597	1887
Cooper st.....	Endicott st. to Charlestown st.	205	604	1887-97
Court st.	Washington st. to Court sq.....	231	642	1891
Court sq.....	Court st. to Court st.....	665	1,883	1881-94
Davis st.	Washington st. to Harrison ave.	323	646	1892
Dartmouth st.....	Boylston st. to Newbury st.....	266	2,058	1894
Doane st.	Kilby st. to Broad st.	312	624	1881
Carried forw'd,	.....	17,351	67,377	

List of Streets Paved with Trinidad Asphalt. — Continued.
City Proper.

Name.	Limits.	Length.	Area.	Year Laid.
<i>Brought forw'd,</i>	.....	17,351	67,377	
Edinboro' st.....	Essex st. to Beach st.....	470	924	1895
Endicott st.....	Cooper st., across Thacher st.....	312	1,005	1884
Exchange pl... ..	Congress st. to Kilby st.....	244	678	1887
Groton st.....	Washington st. to Shawmut ave.....	335	558	1892
Hanover ave.	Hanover st. to North st.	307	266	1892
Harrison ave.....	East Newton st. to East Springfield st..	928	2,681	1888-95
Harrison ave.....	Northerly side of East Springfield st. to Roxbury line .....	.....	130	1888-95
Hollis st.....	Tremont st. toward Washington st.....	276	521	1891
Hudson st.....	Beach st. to within 90 ft. north of Curve st. (minus Kneeland and Harvard sts.)	1,407	3,938	1891
Kilby st.	State st. to Milk st.....	648	2,628	1881
Laconia st.....	Washington st. to Harrison ave.....	330	727	1896
La Grange st.....	Tremont st. toward Washington st.	181	355	1897
Lincoln pl.....	Worcester st. to West Springfield st.....	217	313	1897
Malcolm st.	Mt. Vernon st. to Chestnut st.....	261	290	1892
Massachusetts ave.	Columbus ave. to Tremont st. (southerly roadway)	267	1,621	1892
Massachusetts ave.	Tremont st. to Shawmut ave. (southerly roadway)	470	2,934	1892
Massachusetts ave.	Shawmut ave. to Washington st. (south- erly roadway).....	180	994	1892
Moon st.....	Between North sq. and Fleet st... ..	182	384	1891
North Bennet st...	Hanover st. to Salem st.....	552	920	1883
North Margin st...	Thacher st. to Wiget st.....	515	1,154	1895
Oxford st.....	Beach st. to Essex st.....	430	735	1895
Parmenter st.....	Hanover st. to Salem st.....	279	764	1893
Pinckney st.	Charles st., across Brimmer st.....	271	723	1895
Pine st.	Washington st. to Harrison ave.	419	597	1896
Poplar st.	Chambers st. to Charles st.	1,188	2,442	1887-92
Spring st.....	Poplar st. to Leverett st.	447	908	1895
Stevens st.	Lincoln pl. toward Shawmut ave.....	16	22	1897
Stillman st.....	Between Salem st. and Endicott st.	150	417	1892
Stoddard st.....	Howard st. to Court st.....	135	150	1892
Sun-court st.....	North st. to Moon st.	151	218	1891
Thacher st.....	Charlestown st. to Endicott st.	203	562	1892
Tileston st.....	155 ft. west from Hanover st. to Salem st.	417	470	1887-95
<i>Carried forw'd,</i>	.....	29,539	98,406	

List of Streets Paved with Trinidad Asphalt. — Concluded.**City Proper.**

Name.	Location.	Length.	Area.	Year Laid.
<i>Brought forward,</i>		29,539	98,406	
Unity st.	Charter st. to Tileston st.	330	500	1897
Warrenton st.	Eliot st. to Tremont st.	670	1,587	1891
Warrenton st.	Shawmut ave. to Washington st.	468	910	1891
Water st.	Congress st., across Batterymarch st. ...	325	975	1889
Water st.	Liberty sq. to Broad st.	252	682	1896
Wiggin st.	North Bennet st. to Tileston st.	107	119	1887
Wiget st.	Salem st. to North Margin st.	259	240	1897
		31,950	103,419	

Charlestown.

Austin st.	Seminary pl. to Lawrence st.	144	421	1891
Bunker Hill st. ...	At Tufts st.		150	1897
Corey st.	124 ft. north of Moulton st. to Moulton st.	124	276	1897
Moulton st.	Easterly side of Corey st. to Vine st.	81	243	1897
Moulton st.	Vine st. to Bunker Hill st.	130	390	1897
Rutherford ave. ..	From Devens st., 128 ft. westerly	128	284	1897
Tufts st.	From Bunker Hill st., 141 ft. northerly ..	141	415	1897
Vine st.	Bunker Hill st., across Moulton st.	165	670	1897
		913	2,849	

South Boston.

D st.	West Fifth st. to Gold st.	126	448	1889
E st.	West Third st. to Bolton st.	111	419	1892
Rogers st.	Dorchester st. to Preble st.	360	480	1891
West Sixth st.	West of C st. toward D st.	91	343	1887
West Third st.	153 ft. west of E st., across E st.	185	769	1892
		873	2,459	

Roxbury.

Cabot st.	Tremont st. to Vernon st.	1,959	6,559	1891-92
Cabot st.	Easterly side of Vernon st. to Linden Park st.	484	1,390	1897
Columbus ave.	From 301 ft. south of Camden st., across Terry st.	2,640	15,840	1896
		5,083	23,789	

Streets Paved with Sicilian Rock Asphalt.

City Proper.

Name.	Limits.	Length.	Area.	Year Laid.
Acton st.....	Washington st. to Bradford st.....	259	352	1896
Albany st.....	Easterly side of Stoughton st., across East Concord st.....	285	1,710	1897
Avery st.....	Washington st. to Mason st.....	360	275	1897
Ash st.....	Oak st., across Nassau st.....	220	391	1895
Barton st.....	Leverett st. to Milton st.	427	723	1895
Bradford st.....	Waltham st. to Shawmut ave.....	600	1,270	1897
Charles st.	Between Revere st. and Cambridge st. (in front of Eye and Ear Infirmary) ..	191	225	1895
Cobb st.....	Washington st. to Shawmut ave.....	347	1,040	1897
Decatur st.....	Washington st. to Harrison ave.....	370	781	1892
Dwight st.....	Shawmut ave. to Tremont st.....	716	2,075	1893
Exeter pl.....	Chauncey st. to Harrison ave.	170	387	1897
Fabin st.	Newland st. to Ivanhoe st.....	421	615	1895
Fay st.	Dover st. to Harrison ave.....	318	560	1894
Hamburg st.	Mystic st. to Harrison ave.....	383	597	1896
Hanover st.	Tileston st., across Charter st.....	315	934	1896
Huntington ave..	Boston & Albany Railroad bridge to Cumberland st.	1,591	8,840	1896
Mason st.	From a point 213 ft. south of West st. for a distance of 231 ft. southerly.....	231	480	1894
Massachusetts av..	Washington st. to Albany st. (southerly roadway) ..	662	4,151	1894
Mayo st.	Castle st. to Cobb st.....	251	418	1897
Meander st.....	East Dedham st. to Malden st.	307	437	1896
Motte st.	Washington st. to Harrison ave.....	332	516	1892
Mystic st.	Malden st. to East Dedham st.	204	226	1896
Mystic st.	East Dedham st. to East Canton st.....	215	335	1896
Mystic st.	East Canton st. to East Brookline st. ...	216	337	1896
North Margin st..	Thacher st., toward Endicott st.....	205	518	1897
Norwich st.	Mystic st. to Meander st.	221	339	1896
Ohio st.	Washington st. to Shawmut ave.....	343	277	1896
Pemberton sq.	In front of the Suffolk Court-House	323	1,365	1894
Prince st.	Hanover st. to Bennet ave.....	293	654	1895
Taylor st.	Dwight st. to Milford st.....	196	274	1896
Whitmore st.....	Kneeland st. to Harvard st.	249	445	1895
		11,221	31,548	

Streets Paved with Sicilian Rock Asphalt. — *Concluded.***South Boston.**

Name.	Limits.	Length.	Area.	Year Laid.
Athens st.	West Second st. to A st.	617	916	1895
Athens st.	B st. to C st.	515	746	1892
East Broadway ..	Front of Lincoln School.	180	1,000	1897
K st.	East Sixth st. to East Eighth st.	566	1,083	1896
West Broadway ..	From 196 ft. east of easterly line of Dorchester ave. to A st.	360	2,000	1892
West Broadway ..	Gardner pl. to 150 ft. easterly	150	648	1893
West Broadway ..	Between New England Railroad bridge and 170 ft. west of F st. (3 ft. gutters), ....	.....	1,487	1897
West Broadway ..	170 ft. west of F st. to 248 ft. east of F st.,	448	1,544	1897
		2,836	9,424	

Charlestown.

Warren st.	Winthrop st. to Soley st.	127	365	1895
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Roxbury.

Columbus ave.	Terry st. to within 61 ft. north of Station st.	884	5,304	1896
Huntington ave. ..	Easterly side of Cumberland st. to Massachusetts ave.	747	4,150	1896
Huntington ave. ...	Massachusetts ave. to Gainsborough st.,	587	3,372	1896
		2,218	12,826	

Streets Paved with Seyssel Asphalt.**City Proper.**

Name.	Limits.	Length.	Area.	Year Laid.
Paul st.	Emerald st. to Village st.	123	236	1897
Paul st.	Village st. to Tremont st.	276	456	1897
Pelham st.	Washington st. to Shawmut ave.	320	693	1897
Waterford st.	Washington st. to Shawmut ave.	316	544	1897
		1,045	1,929	

Other Asphalt Streets — City Proper.

Name.	Limits.	Length.	Area.	Year Laid.
Massachusetts ave.	Columbus ave. to Tremont st. (asphaltina).....	267	1,622	1897
Harris st.....	Hanover st. to North st., coal tar (Ayer),	294	425	

South Boston.

I st.....	East Broadway to East Fourth st., coal tar (Ayer)	272	1,027	
		833	3,074	

Summary.

Trinidad asphalt....	Length, 38,819 ft. or	7.35 miles, or	132,516 sq. yds.	
Sicilian rock asphalt, "	16,402 " "	3.10 " "	54,163 " "	
Seyssel asphalt.....	1,045 " "	0.20 " "	1,929 " "	
Other asphalts.....	833 " "	0.16 " "	3,074 " "	
Total sheet asphalts,	57,099 " "	10.81 " "	191,682 " "	
Asphalt blocks.....	3,638 " "	0.69 " "	12,046 " "	
Total.....	60,737 " "	11.50 " "	203,728 " "	

Street Mileage.

The following table shows the length of public highways and the character of the pavements, February 1, 1898:

	Asphalt.	Block.	Brick.	Cobble.	Macadam.	Gravel.	Not graded.	Totals.
Year 1896 report	10.20	80.72	0.41	1.84	242.58	113.20	10.17	459.12
February 1, 1898.								
City proper.....	*9.17	†42.92	0.38	1.28	26.68	0.13	0.37	80.93
Charlestown	0.20	8.94	.....	.....	13.68	.....	0.07	22.89
East Boston .....	.....	4.95	.....	0.13	16.65	15.46	.....	27.19
South Boston... ..	0.75	12.85	.....	0.05	21.43	1.27	5.41	41.76
Roxbury.....	1.38	8.94	.....	0.01	62.13	10.28	2.09	84.83
West Roxbury .....	.....	0.09	.....	.....	44.33	31.67	0.87	76.96
Dorchester .....	.....	4.26	.....	.....	64.68	24.05	2.21	95.20
Brighton .....	.....	.....	.....	.....	21.73	19.57	0.13	41.43
Total	11.50	82.95	0.38	1.47	261.31	102.43	11.15	471.19

NOTE.—The above districts refer to areas enclosed by the original boundary lines.

*Of this amount 0.69 miles = asphalt blocks.

†Of this amount 4.98 miles = granite-block paving on concrete base

Total length of public streets, 471.19 miles.

There have been laid out and accepted by the Street Commissioners during the year, 11.38 linear miles; 24,874 square feet have been discontinued; corrections to previous measurements on account of revision and correction of previous tables from all causes show an increase of 0.69 miles; making a total net increase of 12.07 miles.

The rate of increase from year to year is shown in the following table:

1859.....111.50 miles.	1880.....350.54 miles.	1890.....404.60 miles.
1871.....201.32 "	1881.....355.50 "	1891.....409.60 "
1872.....207.40 "	1882.....359.85 "	1892.....434.59 "
1873.....209.24 "	1883.....367.99 "	1893.....443.34 "
1874.....313.90 "	1884.....374.10 "	1894.....447.65 "
1875.....318.58 "	1885.....379.60 "	1895.....452.12 "
1876.....327.50 "	1886.....383.55 "	1896.....456.11 "
1877.....333.20 "	1887.....390.30 "	1897.....459.12 "
1878.....340.39 "	1888.....392.72 "	1898.....471.19 "
1879.....345.19 "	1889.....397.84 "	

Areas of Pavement.

The following table shows the area of pavements in square yards arranged by districts:

DISTRICTS.	Asphalt.	Block.	Brick.	Cobble.	Macadam.	Gravel.	Not graded.	Totals.
Feb. 1, 1897...	182,797	1,740,577	5,082	20,313	4,455,778	1,845,277	248,993	8,498,817
Feb. 1, 1898.								
City Proper...	*150,989	†929,563	5,018	12,509	502,910	1,508	18,463	1,620,960
Charlestown,	3,214	199,532	.....	.....	205,316	.....	4,348	412,410
East Boston..	.....	111,012	.....	2,600	138,890	284,896	.....	537,398
So. Boston...	12,910	269,409	.....	1,192	381,387	24,856	128,940	818,694
Roxbury.....	36,615	194,476	.....	275	1,146,091	161,410	41,507	1,580,374
W. Roxbury.	.....	2,067	.....	.....	751,809	482,766	13,164	1,249,806
Dorchester ..	.....	94,046	.....	.....	1,159,777	383,242	90,927	1,727,992
Brighton.....	.....	.....	.....	.....	551,293	305,652	2,875	859,820
Total square yards.....	203,728	1,800,105	5,018	16,576	4,837,473	1,644,330	300,224	8,807,454

* Of this amount, 12,046 square yards = asphalt blocks.

† Of this amount, 93,813 square yards = granite-block paving on concrete base.

Total area of public streets 8,807,454 square yards.

INCOME.

Statement showing the amount of bills and cash deposited with City Collector, less bills withdrawn, for the year ending January 31, 1898, by the several divisions of the Street Department:

Bridge Division	\$5,340 28
Boston and Cambridge Bridges	996 74
Ferry Division	171,461 23
Paving Division	57,366 09
Sanitary Division	33,707 43
Sewer Division	179,275 31
Street-Cleaning Division	6,245 01
Street-Watering	3,948 64
	\$458,340 73

Statement showing the amount paid into the city treasury during the same period on account of the several divisions of the Street Department:

Bridge Division	\$1,568 75
Boston and Cambridge Bridges	996 74
Ferry Division	171,454 23
Paving Division	56,647 41
Sanitary Division	35,640 33
Sewer Division	220,894 55
Street-Cleaning Division	1,788 01
Street-Watering	671 95
	\$489,661 97

LAYING-OUT AND CONSTRUCTION OF HIGHWAYS.

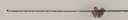
From assessments on abutters for cost of side- walk in front of their premises, chapter 401, Acts 1892	\$11,526 59
Interest on do.	3,106 53
	\$14,633 12
Sewer assessments, chapter 402, Acts 1892	\$80,467 01
Interest on do.	12,809 83
	93,276 84
<i>Amount carried forward,</i>	
	\$107,909 96

<i>Amount brought forward,</i>	\$107,909 96
Street construction, chapter 323, Acts 1891, and amendments, assess- ments:	
Arundel street . . .	\$3,718 43
Interest on do. . .	573 77
	4,292 20
Batavia street . . .	\$11,466 02
Interest on do. . .	2,413 54
	13,879 56
Bay State road . . .	\$11,239 50
Interest on do. . .	957 72
	12,197 22
Granby street . . .	\$5,541 57
Interest on do. . .	472 40
	6,013 97
Greenbrier street . . .	\$593 23
Interest on do. . .	46 70
	639 93
Ivy street . . .	\$9,697 06
Interest on do. . .	1,441 26
	11,138 32
Miner street . . .	\$364 30
Interest on do. . .	182 16
	546 46
Mountfort street . . .	\$3,227 23
Interest on do. . .	491 72
	3,718 95
Newbury street . . .	\$655 45
Interest on do. . .	904 42
	1,559 87
Sherborn street . . .	\$7,468 36
Interest on do. . .	774 85
	8,243 21
St. Germain street . . .	\$797 43
Interest on do. . .	585 56
	1,382 99
	\$171,522 64

BLUE HILL AND OTHER AVENUES.

Paving between railroad tracks \$2,288 85

PART II.



APPENDICES.



PAGES 1 TO 394.



APPENDIX A.

REPORT OF THE DEPUTY SUPERINTENDENT OF THE BRIDGE DIVISION.

927 AND 928 TREMONT BUILDING,
BOSTON, February 1, 1898.

MR. BENJ. W. WELLS, *Superintendent of Streets*.

DEAR SIR: I respectfully submit my annual report of the expenditures, income and operation of the Bridge Division of the Street Department for the financial year ending January 31, 1898.

There was appropriated for the care and maintenance of this division, during the year, the sum of \$125,000.

The total number of bridges in Boston is 132. This number does not include culverts. Four (4) of these bridges, viz.: Harvard, Canal, Prison Point, and West Boston, all connecting with Cambridge, are under the care of two commissioners, one of whom is appointed by the city of Boston and the other by the city of Cambridge.

Thirty-three are wholly supported by railroad corporations, and ninety-nine are supported wholly or in part by the city of Boston.

There are twenty-three tide-water bridges provided with draws; six (6) of these are operated by steam, four (4) by electricity, and thirteen (13) by hand power.

Malden bridge, one of the principal bridges operated by hand power, is in immediate need of extensive repairs, as it is old and badly decayed, and requires constant care to keep it in order.

I would recommend also that steam or electric power be substituted to operate the draw.

Mt. Washington-avenue bridge is also operated by hand power, and is second, on the south side, in the number of openings to permit vessels to pass through, and has a large amount of travel, heavy teaming, etc.

It is hoped that with the extensive improvements in the vicinity of this bridge, provision will be made for its reconstruction.

There are twelve tide-water bridges of great importance, operated as follows: Meridian street, Chelsea (North), Dover street, and Federal street by electric power.

Chelsea (South), Warren, Charles River, Congress street, L street, and Broadway by steam power.

Malden and Mt. Washington avenue by hand power.

During the past year four (4) new trucks have been placed on Warren bridge, new deck put in, sheathing, etc., all the ironwork painted, and the tracks levelled by placing oak sleepers two feet apart underneath. A new engine, with winches, for the purpose of assisting vessels to pass through the draw, thus saving much time to public travel, is being placed in position.

On May 21 a portion of Broadway pier, 118 feet long and 30 feet wide, fell into the water, carrying with it all cross beams and deck, and a large tool-house, necessitating the rebuilding of a new pile structure.

The remainder of the pier is in great need of being rebuilt, and should be attended to this year.

Congress-street bridge needed extensive repairs during the past year. The sidewalks on both sides have been reconstructed, the deck on road-bed, the bulkhead at the draw, and the fender-guards, etc., on the South Boston side, have been repaired.

Close attention should be given to the repairs of this bridge the coming year, owing to the immense increase of travel over the bridge, on account of the new freight facilities located at South Boston.

The following-named bridges were closed to public travel for reconstruction and extensive repairs:

May 4, Western-avenue bridge, new timbers, new deck and sheathing, new sidewalks and piling.

May 25. Leyden street, East Boston, ironwork scraped and painted, new deck and sheathing on road-bed, new sidewalks.

July 26. Blakemore street, new sidewalks.

August 10. Centre span on Beacon street, ironwork cleaned and painted; new timbers, deck and sheathing.

September 16. Shawmut avenue stripped of all old wood-work; iron girders properly cleaned and painted; about thirty iron braces removed and replaced with new ones; new deck and sheathing.

November 3. Keyes street, new timbers, new deck sheathing and new sidewalks.

November 9. Cornwall street, new timbers, deck sheathing and sidewalks.

November 29. Elmwood street being in such a bad condition new timbers for deck, sheathing and sidewalks were used.

December 23. Hyde Park avenue, new stone abutments; new timbers eight by sixteen inches, two feet apart on centre, new deck, sheathing and sidewalks, making a complete new bridge.

The inland bridges have been given a careful inspection and all efforts made to keep them in safe condition; they have been thoroughly swept and kept free and clean.

Good discipline has been maintained among the draw-tenders and their assistants on the different draw-bridges.

They have faithfully and efficiently performed their various duties, and no accidents have occurred through neglect of duty.

The material used in repairs has been of good quality, has always been promptly delivered, thereby causing no delay or disappointment in the performance of work.

The same care has been exercised to keep on hand duplicate sets of gearing.

This precaution will lessen public inconvenience in case of accidents.

I would call attention once more to the fact that more suitable headquarters be provided for the mechanical department in this division; would also recommend that the following-named bridges be provided with proper machinery to assist vessels through, and obviate largely the inconvenience to public travel. Chelsea (North), Dover street, Federal street, Mt. Washington avenue and Meridian street.

Table of expenditures on structural repairs of bridges charged to Bridge Division appropriation, which shows the large amount of work accomplished in excess of previous years:

Western avenue to Cambridge	\$1,744 83
Broadway pier	3,562 98
Beacon street (centre span)	1,150 00
Shawmut avenue	3,000 00
Essex street	903 85
	\$10,361 66

The sum of \$903.85, which was spent in construction of Essex-street bridge, was in excess of the amount appropriated for the same. This was contract work under the Engineering Department.

The following bridges were partially reconstructed and repaired, and charged to Special Appropriations:

Congress street, Cornwall street, Elmwood street, Hyde Park avenue, Keyes street, Leyden street, Warren avenue.

On April 21 a careful inspection of Longwood-avenue bridge was made by the Town Engineer of Brookline and this division.

It was thought expedient to close the bridge, and by mutual agreement of the town of Brookline and city of Boston the bridge was closed to the public, and work of constructing a new bridge commenced at once.

An appropriation of \$150,000 was made for this bridge, half of the expense, \$75,000, to be paid by the town of Brookline, and half by the city of Boston, Park Department.

A stone bridge is now in progress of erection in place of the old wooden affair, and when completed will be the finest in the city.

Respectfully yours,

WM. H. CARBERRY,

Deputy Superintendent.

OBJECT OF EXPENDITURES.

ADMINISTRATION.

Office expenses :

Printing	\$266 88	
Stationery and postage	129 67	
Office books	88 78	
Street Department, 1896 reports	118 15	
Telephone	168 70	
Subscription (newspapers)	10 50	
Directory	5 50	
Atlas (Brighton)	36 50	
Atlas (City Proper and Roxbury)	31 50	
Typewriter supplies	16 75	
Typewriter inspection	7 50	
Roster book and cards	14 00	
Advertising	12 25	
Hand stamps and repairs	9 65	
Typewriting and copying	16 28	
Albums for bridge views	7 65	
Sundry supplies	20 33	
		\$960 59
Salary of Deputy Superintendent		3,000 00
Salary of Chief Clerk and Messenger		2,855 55
<i>Carried forward,</i>		\$6,816 14

<i>Brought forward,</i>	\$6,816 14
Salary of Chief Drawtender	1,795 04
Salary of Chief of Draws and Bridges, 49 weeks . .	1,691 48
Travelling expenses	23 00
Board of Deputy Superintendent's horse and extra horse, and use of horse	513 68
Salary of Civil Service Clerk, 6 weeks	80 58
Salaries of special service clerks, 15 days each . .	120 00
Telephone, Deputy Superintendent's house	96 24
Amount expended, administration	<u>\$11,136 16</u>

OBJECT OF EXPENDITURES.

Office Expenses.

Salaries	\$9,542 65
General office expenditures	1,593 51
	<u>\$11,136 16</u>

TOTAL REGULAR EXPENDITURES.

Administration	\$11,136 16
On tide-water bridges	90,162 47
On inland bridges	12,227 21
North yard and stable	5,122 86
South yard and stable	8,133 57

Total amount expended for the year, February 1, 1897, to January 31, 1898	<u>\$126,782 27</u>
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FINANCIAL STATEMENT.

REGULAR APPROPRIATION.

Appropriation 1897-98	\$125,000 00
Received from Philadelphia and Reading Railway Company (damages to Chelsea [north] bridge) . .	702 53
Received from West End Street Railway Company for work done on Warren Bridge	180 00
Received from Paving Division for work done . .	103 96
Received from Street Cleaning Division for work done	148 99
Transferred from Surplus Revenue, January 31, 1898	646 79
Total	<u>\$126,782 27</u>

Amount of expenditures from February 1, 1897, to January 31, 1898	<u>\$126,782 27</u>
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SPECIAL APPROPRIATIONS IN CHARGE OF BRIDGE DIVISION.

OBJECT OF APPROPRIATION.	Appropriations, Balances and Transfers.	Expended from Feb. 1, 1897, to Jan. 31, 1898.	Balances on hand Jan. 31, 1898.
Charles-river bridge draw, remodeling, etc.	\$407 04	\$407 04	
Chelsea bridge, north, rebuilding draw, etc.	3,030 54	3,030 54	
Gold-street bridge	127,223 38	27,223 38	
Harvard-street bridge, reconstruction	3,000 00	356 20	\$2,643 80
Leyden-street bridge, reconstruction	1,000 00	1,000 00	
Meridian-street bridge, reconstructing draw	1,833 61	1,833 61	
Reconstruction of Bridges	13,500 00	1,884 62	11,615 38
Reconstruction of Essex-street bridge	1,530 57	1,530 57	
Warren bridge, reconstruction	2,000 00	2,000 00	
Totals	\$53,525 14	\$39,265 96	\$14,259 18

¹\$6,000 to be provided for.

Amount of expenditures February 1, 1897, to January 31, 1898	\$39,265 96
Balances unexpended	14,259 18
Amount of appropriations and transfers	<u>\$53,525 14</u>

AMOUNTS CHARGED TO SPECIAL APPROPRIATIONS IN CHARGE OF OTHER DIVISIONS.

NAME OF APPROPRIATION.	Where Expended.	Amount Expended.
Congress and L streets	Congress-street bridge ..	\$1,218 46
City Council, Incidental Expenses	Jeffries point, Public Landing	300 00
Laying-out and construction of highways	Ipswich street	4,922 86
Street Improvements, Ward 13	Broadway drawbridge ..	2,240 63
Street Improvements, Ward 25	Essex-street bridge	485 00
Stony-brook Improvement	Cornwall-street bridge, Elmwood-street bridge, Hyde Park-avenue bridge, Keyes-street bridge, Linden Park-street bridge	711 49
Total .....	.....	\$9,878 44

Amount expended and charged to regular appropriation	\$126,782 27
Amount expended and charged to Bridge Division, specials	39,265 96
Amount expended and charged to appropriations in charge of other divisions	9,878 44
Grand total of expenditures, February 1, 1897, to January 31, 1898	<u>\$175,926 67</u>

INCOME.

The amount of bills deposited with the City Collector during the year was as follows:

Work done by this division	\$39 00
Rent of land, buildings and pier	1,193 75
Rent of buildings (leases)	300 00
Rent for location of cable-houses and boxes	2,950 00
Total	<u>\$4,482 75</u>

A detailed statement of expenditures, and description of work performed follows; also a list of those bridges supported wholly or in part by the city of Boston; statement of the public landing-places; list of cable-houses and boxes; census of traffic taken on some of the most important bridges; number of draw openings made for navigation; width of draw openings, and table showing widths of bridges and kind of roadway and sidewalks.

TIDE-WATER BRIDGES.

Broadway bridge (over Fort Point channel).

Patched deck in various places, patched sheathing in numerous places, under seventeen orders issued at different times, or practically sheathed the bridge. Built new steps leading to float stage. Extensive repairs made on pier and fender-guard, repaired engines, machinery and water-way and made general repairs; repaired water-supply pipe leading to engine-room, and painted machinery.

Carpenters	\$1,504 43
Painters	75 25
Lumber	676 27
Nails	30 87
Ironwork	86 84
Repairing engines	204 05
Repairing machinery	54 00
Hardware	3 45
Paint stock	18 80
<i>Carried forward,</i>	<u>\$2,653 96</u>

<i>Brought forward,</i>	\$2,653 96	
Plumbing	61 55	
Repairing iron fence . .	12 80	
Repairing pier	3,172 50	
Repairing end of pier and fender-guard	550 00	
Cement	2 40	
Views	6 00	
Advertising	4 25	
		\$6,463 46

Regular expenses :

Draw-tenders	\$5,499 00	
Substitutes	375 84	
Coal	225 04	
Gas	43 00	
Water	25 00	
Ice	6 00	
Small supplies	56 40	
		6,230 28

\$12,693 74

Cambridge-street bridge (from Brighton to Cambridge).

Sheathed draw, put on new flaps, repaired coal-box,
built out platform and repaired machinery.

Carpenters	\$36 25	
Lumber	23 99	
Nails	1 15	
Ironwork	7 50	
Repairing machinery . .	29 25	
		\$98 14

Regular expenses :

Draw-tender	\$365 56	
Coal	10 82	
Supplies	1 98	
		378 36

476 50

Charles-river bridge (from Boston to Charles-town.)

Sheathed draw, patched sheathing at six different
times, built new house, repaired engine, machin-
ery, gate, fence and fender-guard, put in oak
headers, reset buoy and stone, and painted new
house.

Carpenters	\$184 65	
Painters	36 44	
Lumber	119 65	
Nails	5 70	

Carried forward, \$346 44

\$13,170 24

<i>Brought forward,</i>	\$346 44	\$13,170 24
Ironwork	16 50	
Repairing machinery . .	135 73	
Repairing engine . . .	13 65	
Hardware	3 47	
Paint stock	9 11	
Plumbing	11 95	
Repairing fender-guard . .	31 65	
Resetting buoy and stone .	225 00	
Displacement of tide-water,	8 24	
		\$801 74

Regular expenses :

Draw-tenders	\$4,705 72	
Substitutes	187 50	
Coal	382 32	
Gas	41 13	
Water	25 00	
Cordage	60 36	
Ice	6 00	
Small supplies	55 62	
		5,463 65

6,265 39

Chelsea bridge [North] (over North channel,
Mystic river).

Patched sheathing, repaired machinery and pier,
put in new headers, repaired water-way, draw-
tender's house and main water-supply pipe,
and painted fence.

Carpenters	\$48 00	
Painters	52 48	
Lumber	2 68	
Ironwork	42 12	
Repairing machinery . .	19 42	
Paint stock	13 12	
Plumbing	6 50	
Repairing damage to pier .	640 00	
Door	3 86	
Views	3 00	
		\$831 18

Regular expenses :

Draw-tenders	\$4,386 72	
Substitutes	90 00	
Coal	36 62	
Electric lights	46 00	
Water	10 00	
Ice	6 00	
Small supplies	41 85	
		4,617 19

5,448 37

Carried forward,

\$24,884 00

Brought forward,
Chelsea bridge, [South] (over South Channel,
 Mystic river).

\$24,884 00

Patched sheathing five different times, repaired
 motor, pier, water-way and iron fence, erected
 rain leader, shingled draw-house, and painted
 same and row-boat.

Carpenters	\$154 70	
Painters	10 75	
Lumber	65 13	
Nails	3 10	
Ironwork	37 05	
Repairing machinery . .	84 38	
Covering boiler . . .	74 75	
Repairing iron fence . .	63 76	
Paint stock	2 12	
Rain leader	11 80	
Painting boat	18 00	
		\$525 54

Regular expenses :

Draw-tenders	\$4,396 27	
Substitutes	57 50	
Coal	199 61	
Gas	28 04	
Water	32 50	
Ice	6 00	
Hose	5 28	
Chairs	6 00	
Small supplies	38 40	
		4,769 60

5,295 14

Chelsea-street bridge (from East Boston to
 Chelsea).

Sheathed the bridge (East Boston end) and repaired
 ring bolts.

Carpenters	\$72 00	
Lumber	173 43	
Nails	8 25	
Ironwork	1 35	
		\$255 03

Regular expenses :

Draw-tender	\$299 00	
Coal	7 36	
		306 36

561 39

Commercial Point or Tenean bridge, Dor-
 chester.

Patched deck and sheathing.

Carpenters	\$56 25	
Lumber	91 93	

Carried forward

\$148 18

 \$30,740 53

<i>Brought forward,</i>	\$148 18	\$30,740 53
Nails	4 38	
Bolts and clamps	10 44	
		\$163 00
Regular expenses :		
Draw-tender	50 00	
		213 00

Congress-street bridge (over Fort Point channel).

Sheathed draw five times, patched sheathing in various places, repaired machinery, iron fence, corner of pier, centre, gate, fence rail and face boards, put in new headers. Repaired sidewalk and water-pipes and painted face boards.

Carpenters	\$961 15	
Painters	45 00	
Lumber	451 06	
Nails	23 53	
Ironwork	57 03	
Repairing machinery	266 59	
Hardware	3 65	
Paint stock	11 30	
Repairing iron fence	20 75	
Damage to tug	75 00	
Accident, cost of survey	5 00	
Teaming	50 00	
		\$1,970 06

Regular expenses :

Draw-tenders	\$5,284 24	
Substitutes	230 00	
Coal	271 70	
Water	107 25	
Repairing clock	5 00	
Ice	6 00	
Small supplies	67 07	
		5,971 26

7,941 32

Dover-street bridge (over Fort Point channel).

Sheathed draw, patched sheathing, repaired waterway, pier, machinery, iron fence, commutator motor, water-pipes and painted motor-box.

Carpenters	\$219 77	
Painters	1 50	
Lumber	334 48	
Nails	15 92	
Ironwork	16 92	

<i>Carried forward,</i>	\$588 59	\$38,894 85
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<i>Brought forward,</i>	\$588 59	\$38,894 85
Repairing machinery . . .	8 50	
Repairing iron fence . . .	28 70	
Repairing motor, commuta- tor, etc.	35 27	
Plumbing	16 97	
		\$678 03

Regular expenses :

Draw-tenders	\$5,284 24	
Substitutes	171 25	
Coal	27 90	
Water	10 00	
Ice	6 00	
Small supplies	56 26	
		5,555 65
		6,233 68

Essex-street bridge (from Brighton to Cam-
bridge).

Sheathed draw and painted draw-house.	
Carpenters	\$12 90
Painters	63 00
Lumber	23 87
Nails	1 14
Paint stock	15 75
Smokestack	11 00
Contract work, W. S. Ren- dle, amount in excess of special appropriation for reconstruction of Essex- street bridge, paid by Bridge Division	903 68
	\$1,031 34

Regular expenses :

Draw-tender	\$658 32	
Substitute	25 32	
Coal	20 64	
Small supplies	1 91	
		706 19
		1,737 53

Federal-street bridge (over Fort Point chan-
nel).

Sheathed both roadways, patched sheathing, re- paired water-pipe, machinery, gate, sidewalk and boat, reset buoy and painted bridge.	
Carpenters	\$185 56
Painters	170 25
Lumber	115 63

<i>Carried forward,</i>	\$471 44	\$46,866 06
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<i>Brought forward,</i>	\$471 44	\$46,866 06
Nails	5 50	
Ironwork	17 11	
Repairing machinery	212 89	
Hardware	3 90	
Paint stock	40 00	
Plumbing	24 95	
Resetting buoy	75 00	
Repairing gate	21 30	
Hardwood rolls	9 00	
		\$881 09

Regular expenses ;		
Draw-tenders	\$5,284 24	
Substitutes	180 00	
Coal	47 15	
Gas	65 60	
Water	10 00	
Ice	6 00	
Small supplies	55 83	
		5,648 82
		6,529 91

Granite bridge (from Dorchester to Milton).

Repaired sidewalk and fence and put on new flaps.

Carpenters	\$25 00	
Lumber	3 63	
Bolts and straps	9 95	
		\$38 58

Regular expenses :

Draw-tender	\$239 20	
Small supplies	1 50	
		240 70
		279 28

L-street bridge (over reserved channel at junction of Congress and L streets).

Patched sheathing, put in new header on sidewalk and new davit, repaired engine, machinery and water-service pipe, erected new smoke-pipe and painted bridge.

Carpenters	\$103 45	
Painters	476 60	
Lumber	20 59	
Nails	96	
Ironwork	34 96	
Repairing engine	28 70	
Repairing machinery	26 95	
Paint stock	119 15	

<i>Carried forward,</i>	\$811 36	\$53,675 25
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<i>Brought forward,</i>	\$811 36	\$53,675 25
Plumbing	90 89	
Smoke-pipe	19 50	
		\$921 75

Regular expenses ;

Draw-tenders	\$4,019 76	
Substitutes	514 76	
Coal	226 95	
Water	79 50	
Ice	6 00	
Small supplies	51 85	
		4,898 82

5,820 57

Malden bridge (from Charlestown to Everett).

Repaired deck and patched sheathing eight different times, repaired headers, sidewalk and machinery, and put new clapboards on house, and painted house outside.

Carpenters	\$251 70	
Painters	84 75	
Lumber	50 43	
Nails	2 40	
Ironwork	11 92	
Repairing machinery .	71 20	
Hardware	2 46	
Paint stock	21 18	
Sheathing paper and strips,	2 54	
Two blinds	75	
		\$499 33

Regular expenses :

Draw-tenders	\$3,589 04	
Substitutes	110 00	
Coal	24 77	
Gas	23 38	
Water	17 00	
Clock	9 00	
Ice	6 00	
Small supplies	39 57	
		3,818 76

4,318 09

Meridian-street bridge (from East Boston to Chelsea).

Patched sheathing, repaired stable, water-way, headers, sidewalk, shaft and gears, put in new gears and new headers, reset buoy, put in new gas fixtures and repaired pipes, and painted house inside.

Carpenters	\$130 50	
Painters	20 50	

<i>Carried forward,</i>	\$151 00	
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		\$63,813 91
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<i>Brought forward,</i>	\$151 00	\$63,813 91
Lumber	17 97	
Nails	88	
Ironwork	39 30	
Gear castings	110 59	
Resetting buoy	75 00	
Repairing shaft and gears .	64 03	
Plumbing	25 10	
Paint stock	5 12	
Repairing stove	13 75	
Repairing roof	15 00	
Electric lamps	9 63	

 \$527 37

Regular expense:

Draw-tenders	\$4,386 72
Substitutes	168 30
Coal	28 66
Feed	94 98
Gas	56 61
Water	10 00
Horseshoeing	34 25
Ice	6 00
Small supplies	43 34

 4,828 86

 5,356 23
Mt. Washington-avenue bridge (over Fort Point channel).

Sheathed draw, patched deck and sheathing at various times, repaired latch, water-way, ring-bolt, wheel-guard and sidewalk, put in headers, new sink, faucet, etc., and painted small part of fence.

Carpenters	\$529 88
Painters	21 26
Lumber	216 91
Nails	10 32
Ironwork	40 96
Paint stock	5 31
Plumbing	32 73

 \$857 37

Regular expenses:

Draw-tenders	\$4,269 60
Substitutes	352 93
Coal	51 74
Gas	49 30
Water	10 00
Rent of land	60 00

Carried forward,

 \$4,793 57

 \$857 37

 \$69,170 14

<i>Brought forward,</i>	\$4,793 57	\$857 37	\$69,170 14
Ice	6 00		
Small supplies	42 13		

5,699 07

Neponset bridge (from Dorchester to Quincy).
Sheathed draw, patched sheathing and put in new header.

Carpenters	\$101 80		
Lumber	89 61		
Nails	4 27		
Bolts and washers	14 80		
		\$210 48	

Regular expenses :

Draw-tender	\$398 84		
Small supplies	1 83		
		400 67	

611 15

North Beacon-street bridge (from Brighton to Watertown).

Sheathed draw, patched sheathing several times and repaired sidewalk.

Carpenters	\$81 95		
Watchman	26 60		
Lumber	113 95		
Nails	5 42		
Ironwork	8 30		
		\$236 22	

Regular expenses :

Draw-tender	74 88		
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311 10

North Harvard-street bridge (from Brighton to Cambridge).

Patched sheathing, repaired fence, latch and hinge, put in new flap and crank handle, and built out platform.

Carpenters	\$80 30		
Lumber	64 79		
Nails	3 08		
Crank handle	3 00		
Bolts and clamp	15 58		
		\$166 75	

Regular expenses :

Draw-tender	\$365 56		
Repairing stove	4 20		
		369 76	

536 51

Carried forward,

\$76,327 97

Brought forward,

\$76,327 9

Warren bridge (from Boston to Charlestown).

Patched sheathing fifteen different times, and old deck during the year, repaired end of draw, pier, boat, fence, gas fixtures, engines and machinery.
 - Put in new hard pine deck and sheathed downstream draw, calked the deck on both draws, put in three trucks and painted ironwork on draw and also bridge.

Carpenters	\$920 32	
Painters	431 81	
Lumber	692 38	
Nails	35 85	
Ironwork	56 01	
Repairing engines . .	29 78	
Repairing machinery .	175 26	
Hardware	8 23	
Paint stock	44 63	
Calking decks on each draw	370 00	
Repairing trucks . .	115 40	
Damage to barge . .	43 14	
Repairing gas fixtures .	14 15	
Teaming	27 00	
		\$2,963 96

Regular expenses:

Draw-tenders	\$5,284 24	
Substitutes	217 50	
Coal	603 11	
Gas	45 54	
Water	25 00	
Ice	6 00	
Watering	470 00	
Small supplies	48 61	
		6,700 00

9,663 96

Western-avenue bridge (from Brighton to Cambridge).

Put in new deck on draw and sheathed the same, patched sheathing, put in new flaps, built new sidewalk, repaired machinery, removed old pier and painted bridge.

Carpenters	\$388 00	
Painters	53 13	
Lumber	525 70	
Nails	17 00	
Ironwork	20 40	
Paint stock	13 25	

Carried forward,

\$1,017 48

\$85,991 93

<i>Brought forward,</i>	\$1,017 48	\$85,991 93
Repairing machinery . .	114 85	
Removing old pier . .	275 75	
	\$1,408 08	
Regular expenses :		
Draw-tender	\$365 56	
Coal	5 41	
	370 97	
		1,779 05

Western-avenue bridge (from Brighton to Watertown).

Patched sheathing, sheathed draw, put in oak headers, repaired machinery and painted fence.		
Carpenters	\$100 65	
Painters	11 00	
Lumber	113 37	
Ironwork	5 57	
Repairing machinery . .	10 25	
Nails	5 40	
Paint stock	2 75	
	\$248 99	
Regular expenses :		
Draw-tender	\$74 88	
Oil-can	1 00	
	75 88	
		324 87

Winthrop bridge (from Breed's Island to Winthrop).

Patched sheathing four times, and painted fence.		
Carpenters	\$43 75	
Painters	10 50	
Lumber	41 99	
Nails	2 00	
Paint stock	2 65	
	\$100 89	
Regular expenses :		
Draw-tender	100 00	
	200 89	

Sundry Expenditures on tide-water bridges.

Oak lumber for headers . .	\$194 90	
Sundry car-fares, West End St. Railway (mechanics),	150 00	
Sundry Street Department tickets, N.Y., N.H. & H. R.R. (mechanics) . .	20 00	
<i>Carried forward,</i>	\$364 90	\$88,296 74

<i>Brought forward,</i>	\$364 90	\$88,296 74
Regular expenses :		
Messenger to Chief Draw-		
tender	\$797 68	
Draw-tenders' books	99 75	
	897 43	
		1,262 33
Public landings.		
Repairs.		
Jeffries Point :		
Demolished float.		
Carpenters	\$219 00	
Watchman	55 00	
Drift bolts, chisels and		
wedges, and repairs on		
same	25 90	
Teaming	3 50	
	\$303 40	
Regular expenses :		
East Boston :		
Rent	\$250 00	
Watchman	50 00	
	300 00	
		603 40
Total expended on tide-water bridges		<u><u>\$90,162 47</u></u>

RECAPITULATION.

*Table showing Expenditures on the Tide-water Bridges for the
Year February 1, 1897, to January 31, 1898.*

NAME OF BRIDGE.	Repairs, Labor, Lumber, Ironwork and Painting.	Regular Ex- penses, Salaries, Fuel and Supplies.	Total.
Broadway.....	\$6,463 46	\$6,230 28	\$12,693 74
Cambridge street.....	98 14	378 36	476 50
Charles river.....	801 74	5,463 65	6,265 39
Chelsea (North).....	831 18	4,617 19	5,448 37
Chelsea (South).....	525 54	4,769 60	5,295 14
Chelsea street.....	255 03	306 36	561 39
Commercial point.....	163 00	50 00	213 00
Congress street.....	1,970 06	5,971 26	7,941 32
Dover street.....	678 03	5,555 65	6,233 68
Essex street.....	1,031 34	706 19	1,737 53
Federal street.....	881 09	5,648 82	6,529 91
Granite.....	38 58	240 70	279 28
L street.....	921 75	4,898 82	5,820 57
Malden.....	499 33	3,818 76	4,318 09
Meridian street.....	527 37	4,828 86	5,356 23
Mt. Washington avenue.....	857 37	4,841 79	5,699 07
Neponset.....	210 48	400 67	611 15
North Beacon street.....	236 22	74 88	311 10
North Harvard street.....	166 75	369 76	536 51
Warren.....	2,963 96	6,700 00	9,663 96
Western avenue (to Cambridge)....	1,408 08	370 97	1,779 05
Western avenue (to Watertown)....	248 99	75 88	324 87
Winthrop.....	100 89	100 00	200 89
Sundry expenditures.....	364 90	897 43	1,262 33
Public landings.....	303 40	300 00	603 40
Totals.....	\$22,546 68	\$67,615 79	\$90,162 47

INLAND BRIDGES.

Albany-street bridge (over Boston and Albany Railroad).

Patched sheathing.

Carpenters	.	.	.	.	.	\$2 20
Lumber	.	.	.	.	.	4 09
Nails	.	.	.	.	.	19

\$6 48
Allston bridge (over Boston and Albany Railroad, at Cambridge street).

Patched sheathing twice.

Carpenters	.	.	.	.	.	\$36 25
Lumber	.	.	.	.	.	88 02
Nails	.	.	.	.	.	4 19

128 46
Ashland-street bridge (over New York, New Haven & Hartford Railroad, Providence Division).

Sheathed the bridge and repaired fence.

Carpenters	.	.	.	.	.	\$43 30
Lumber	.	.	.	.	.	83 67
Nails	.	.	.	.	.	4 19

131 16
Beacon-street bridge (over Boston and Albany Railroad).

Reconstructed centre roadway by putting in new beams, new deck and sheathing, and cleaning and painting ironwork, also painted the entire bridge.

Carpenters	.	.	.	.	.	\$376 15
Painters	.	.	.	.	.	738 82
Flagman	.	.	.	.	.	34 25
Lumber	.	.	.	.	.	491 04
Nails	.	.	.	.	.	23 38
Bolts	.	.	.	.	.	2 10
Repairing hammers	.	.	.	.	.	3 50
Paint stock	.	.	.	.	.	254 40
Views	.	.	.	.	.	2 00

1,925 64
Beacon-street bridge (over water-way).

Sheathed the bridge and built new sidewalk, also repaired sheathing and sidewalk.

Carpenters	.	.	.	.	.	\$109 05
Lumber	.	.	.	.	.	101 15
Nails	.	.	.	.	.	4 81

215 01
Carried forward,

\$2,406 75

Brought forward, \$2,406 75
Beech-street culvert (near Anawan avenue,
 West Roxbury).

Patched sheathing.
 Carpenters 2 50

Berkeley-street bridge (over Boston & Albany Railroad).

Patched deck and sheathing.
 Carpenters \$54 50
 Lumber 41 57
 Nails 1 98
98 05

Berkeley-street bridge (over New York, New Haven & Hartford Railroad, Providence Division).

Patched deck and sheathing four times.
 Carpenters \$43 75
 Lumber 75 20
 Nails 3 58
122 53

Blakemore-street bridge (over New York, New Haven & Hartford Railroad, Providence Division).

Built two new sidewalks.
 Carpenters \$131 13
 Lumber 73 26
 Nails 3 51
207 90

Bolton-street bridge (over New England Railroad).

Reconstructed bridge, new beams, new deck, sidewalks and fence.
 Carpenters \$70 25
 Lumber 76 21
 Nails 3 63
 Bolts 6 96
157 05

Boylston-street bridge (over Boston & Albany Railroad).

Patched sheathing.
 Carpenters \$12 50
 Nails 60
13 10

Carried forward, \$3,007 88

Brought forward,

\$3,007 88

Broadway-bridge (over Boston and Albany Railroad).

Put in new beam 16 feet long, replaced deck, patched sheathing, repaired fence, and painted bridge.

Carpenters	\$80 65
Painters	105 00
Lumber	147 73
Nails	7 05
Paint stock	25 95
Repairing iron fence	21 06

387 44

[Portion of labor paid in 1896.]

Brookline-avenue bridge (over Boston & Albany Railroad).

Sheathed one side.

Carpenters	\$20 90
Lumber	79 23
Nails	3 77

103 90

[Portion of labor paid in 1896.]

Byron-street bridge (over Boston, Revere Beach and Lynn Railroad).

Patched sheathing.

Carpenters	\$3 75
Lumber	3 50

7 25

Central-avenue bridge (from Dorchester to Milton, over Neponset river).

Built new sidewalk.

Carpenters	\$31 40
Lumber	38 00
Nails	1 81

71 21

Columbus-avenue bridge (over Boston and Albany Railroad).

Patched sheathing four times and painted bridge.

Carpenters	\$132 95
Painters	241 25
Lumber	57 54
Nails	2 74
Paint stock	60 30
Paint brushes	1 16
Cutting off post bracket	2 25

498 19

Carried forward,

\$4,075 87

<i>Brought forward,</i>		\$4,075 87
Cottage-street [foot] bridge (over flats, East Boston).		
Bridge-tender	\$686 00	
Repairing stove	7 35	
Coal	9 56	
Ice	6 00	
		708 91

Dartmouth-street bridge (over Boston and Albany, and Providence Division of New York, New Haven & Hartford Railroad).		
Sheathed both roadways, repaired fence and sidewalk and painted bridge.		
Carpenters	\$113 20	
Painters	349 69	
Lumber	180 27	
Nails	8 88	
Repairing iron fence	10 85	
Paint stock	55 96	
Bolts	70	
		719 55

Dorchester-street bridge (over New York, New Haven & Hartford Railroad, Plymouth Division).		
Paid New York, New Haven & Hartford Railroad Company for small repairs, painting and sheathing, city's part		18 49

Ferdinand-street bridge (over Boston and Albany Railroad).		
Patched deck and sheathing twice.		
Carpenters	\$13 90	
Lumber	67 29	
Nails	3 20	
		84 39

Gardner-street culvert (near Cow Island, West Roxbury).		
Patched deck and sheathing.		
Carpenters	\$5 00	
Lumber	4 71	
		9 71

Irvington-Street [foot] bridge (over New York, New Haven and Hartford Railroad, Providence Division).		
Repaired steps.		
Carpenters	1 25	
		\$5,618 17
<i>Carried forward,</i>		

Brought forward,

\$5,618 17

Leyden-street bridge (over Boston, Revere Beach and Lynn Railroad).

Put in new deck and sheathed the same.

Carpenters	.	.	.	.	.	\$113 50
Watchman	.	.	.	.	.	15 00
Lumber	.	.	.	.	.	80 43
Nails	.	.	.	.	.	31 70

240 63

[Balance of work done charged to Special appropriation.]

Linden Park-street bridge (over Stony brook).

Patched deck, sheathing and sidewalk.

Carpenters	.	.	.	.	.	\$2 50
Lumber	.	.	.	.	.	1 99

4 49

Longwood-avenue bridge (from Roxbury to Brookline).

Patched deck, sheathing and fence.

[Roadway closed to travel part of the year.]

Watchman	.	.	.	.	.	\$110 25
Carpenters	.	.	.	.	.	11 75
Views	.	.	.	.	.	3 00
Lumber	.	.	.	.	.	89
Nails	.	.	.	.	.	56

126 45

Massachusetts-avenue bridge (over Boston & Albany Railroad).

Sheathed one side and patched the other.

Carpenters	.	.	.	.	.	\$44 75
Lumber	.	.	.	.	.	99 40
Nails	.	.	.	.	.	4 74

148 89

Massachusetts-avenue bridge (over New York, New Haven & Hartford Railroad, Providence Division).

Sheathed roadways.

Carpenters	.	.	.	.	.	\$54 20
Lumber	.	.	.	.	.	72 94
Nails	.	.	.	.	.	3 47

130 61

Mattapan bridge (from Dorchester to Milton).

Sheathed bridge and repaired sidewalk.

Carpenters	.	.	.	.	.	\$7 91
Lumber	.	.	.	.	.	18 99

26 90

[Nails taken from yard.]

Carried forward,

\$6,296 14

Brought forward,

\$6,296 14

Shawmut-avenue bridge (over Boston & Albany Railroad).

Repaired girders, cross-braces, etc., put in new angle irons where needed, and made general repairs. Laid new deck on roadway, and sheathed the same and painted all ironwork.

Carpenters	\$615 54
Painters	1,669 52
Watchman	165 40
Flagman	82 00
Lumber	370 51
Nails	21 34
Angle iron, rivets, etc., and labor at bridge	119 05
Bolts, washers, iron plates and repairing hammers and scrapers	61 17
Paint-stock	142 54
Teaming	6 00
Views	2 00

3,255 07

Spring-street bridge (from West Roxbury to Dedham, over Charles river).

Repaired picket fence.

Lumber	\$1 60
Nails	20

1 80

Swett-street bridge (east of New England Railroad).

Put in new post, repaired fence and sidewalk.

Carpenters	\$52 75
Lumber	50 31
Bolts	7 32
Nails	2 40

112 78

Swett-street bridge (west of New England Railroad).

Patched deck and sheathing and repaired sidewalk.

Carpenters	\$19 00
Lumber	12 16
Nails	53

31 69

Carried forward,

\$9,697 48

Brought forward,

\$9,697 48

West Fourth-street bridge (over New York, New Haven & Hartford Railroad, Plymouth Division).

Sheathed portion of roadway and patched sheathing, also cut four openings in iron fence.

Carpenters	\$87 30
Lumber	173 86
Nails	8 28
Cutting openings in fence	64 70

334 14

West Newton-street bridge (over New York, New Haven & Hartford Railroad, Providence Division).

Sheathed roadways and painted bridge.

Carpenters	\$46 30
Painters	50 00
Lumber	66 14
Nails	3 15
Paint stock	12 50

178 09

West Rutland square [foot] bridge (over New York, New Haven & Hartford Railroad, Providence Division).

Built four new flights of steps.

Carpenters	\$119 75
Lumber	30 70
Nails	1 47
Bolts	2 75

154 67

Sundry expenditures, on inland bridges.

Labor, on snow	\$526 33
Labor, cleaning bridges	965 55
Teaming sweepings	6 75
Sundry car-fares, West End Street Railway (mechanics)	100 00
Sundry Street Department tickets, New York, New Haven & Hartford Railroad (mechanics)	11 25

1,609 88

Atlantic avenue (near Central Wharf).

Repaired sidewalk and fence.

Carpenters	\$52 25
Lumber	40 51
Bolts, rods, etc.	11 20
Work done for Paving Division	103 96

Carried forward,

\$12,078 22

Brought forward,

812,078 22

Federal-street bridge.

Built fender-guard for snow dump.

Carpenters \$15 00

Lumber furnished by Street Cleaning
Division.**North Grove-street stable.**

Repaired stable.

Carpenters \$56 25

Lumber 53 74

Nails 1 50

111 49**Revere-street sea wall.**

Built fender-guard for snow dump.

Carpenters 22 50

\$148 99Lumber, bolts, etc., furnished by Street
Cleaning Division.

Work done for Street Cleaning Division 148 99

Total expended on inland bridges \$12,227 21

RECAPITULATION.

Table showing Expenditures on the Inland Bridges for the Year, February 1, 1897, to January 31, 1898.

Name of Bridge.	Repairs, Labor, Lumber, Ironwork and Painting.
Albany street	\$6 48
Allston	128 46
Ashland street	131 16
Beacon street (over B. & A. Railroad)	1,925 64
Beacon street (over water-way)	215 01
Beech street (culvert)	2 50
Berkeley street (over B. & A. Railroad)	98 05
Berkeley street (over Providence Division)	122 53
Blakemore street	207 90
Bolton street	157 05
Boylston street (over B. & A. Railroad)	13 10
Broadway (over B. & A. Railroad)	387 44
Brookline avenue	103 90
Byron street	7 25
Central avenue	71 21
Columbus avenue	498 19
Cottage street	708 91
Dartmouth street	719 55
Dorchester street	18 49
Ferdinand street	84 39
Gardner street (culvert)	9 71
Irvington street	1 25
Leyden street	240 63
Linden Park street	4 49
Longwood avenue	126 45
Massachusetts avenue (over B. & A. Railroad)	148 89
Massachusetts avenue (over Providence Division)	130 61
Mattapan	26 90
Shawmut avenue	3,255 07
Spring street	1 80
Swett street (east)	112 78
Swett street (west)	31 69
West Fourth street	334 14
West Newton street	178 09
West Rutland square	154 67
Sundry expenditures	1,609 88
Work done for Paving Division	103 96
Work done for Street Cleaning Division	148 99
Total	<u>\$12,227 21</u>

REGULAR MAINTENANCE EXPENSES AT NORTH AND SOUTH YARDS.

NORTH YARD, DISTRICT NO. 1.

Warren Bridge.

Messengers	\$1,518 65
Watchman	686 00
Boys	303 45
Tools for carpenters	20 76
Tools for painters	3 32
Gas	29 53
Telephone	126 75
Kerosene oil	9 76
Water	25 00
Ice	6 00
Street horses	7 48
Wedges	3 50
Small supplies	17 04

\$2,757 24

STABLE, DISTRICT NO. 1.

Warren Bridge.

Teamster	\$740 00
Hostler	672 00
Stable boy	269 50
Feed	249 53
Bay Gelding No. 602.	125 00
Repairing buggy	15 69
Repairing harness	42 75
Horseshoeing	181 50
Veterinary service	30 00
Wagon jack	2 75
Small supplies	36 90

2,365 62

Total expended, North Yard and Stable

\$5,122 86

SOUTH YARD, DISTRICT NO. 2.

No. 45 Foundry Street.

Messengers	\$1,503 31
Watchman	686 00
Lumber measurer (16 weeks)	240 00
Boys	673 75
Tools for carpenters	52 36
Tools for painters	129 30

Carried forward,

\$3,284 72

<i>Brought forward,</i>		\$3,284 72.
Telephone	133 90	
Hardware	7 42	
Coal	18 36	
Water	10 00	
Traffic account	38 50	
Plumbing	8 20	
Sand-box	26 80	
Lanterns	15 92	
Ice	6 00	
Small supplies	32 48	
		\$3,582 30.

STABLE, DISTRICT NO. 2.
No. 135 Dorchester Avenue.

Teamster	\$870 00	
Stable boy	640 35	
Board of horses	1,487 50	
Repairing wagon	27 25	
Repairing buggies	195 75	
Repairing vehicles by Sanitary Division	138 77	
Veterinary service	106 25	
Repairing harness	35 55	
New harness	60 00	
Clipping horse	2 00	
Horseshoeing	205 00	
Rent of old stable, one month	50 00	
Concord wagon	135 00	
Second-hand box buggy	115 00	
New cut under buggy	300 00	
Dark chestnut mare No. 642	115 00	
Use of buggy	15 00	
Robes	16 25	
Wagon cushion	10 00	
Supplies	26 60	
		4,551 27
Total expended, South Yard and Stable.		
		\$8,133 57

SPECIAL APPROPRIATIONS.

IN CHARGE OF BRIDGE DIVISION.

Charles-river bridge, draw, remodelling, etc.
 (Boston to Charlestown).

Repaired stable.

Carpenters	\$319 08	
Lumber	83 38	
Nails and hardware	4 58	

Total expended January 31, 1898 . . . \$407 04

[Appropriation \$407.04.]

Chelsea bridge [North], rebuilding draw, etc.
(over North channel, Mystic river).

Sheathed the draw, repaired pier, completed additions to draw machinery caused by changing motive power to electricity, and painted bridge and draw-tenders' house outside.

Carpenters	\$1,680 62
Painters	663 32
Lumber	164 86
Two mitre gears	50 00
Fitting new bed plate, taking out old gears and fitting new ones	65 34
Stock and labor squaring gears	16 80
Repairing motor	210 51
Rewinding spare armature	74 44
Displacement of tide-water	23 25
Bolts and straps	56 40
Car fares	25 00

Total expended January 31, 1898	\$3,030 54
May, 1897, transferred to Warren Bridge, reconstruction	2,000 00

Appropriation	<u>\$5,030 54</u>
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Gold-street bridge (over New England Railroad).

Raising grade of street near the bridge.

Perry heirs, grade damages	\$7,500 00
John Hayes, "	1,950 00
Bernard J. Reagan, "	200 00
Mary Sullivan, "	3,000 00
Edward J. Leary, "	415 00
Julia Curry <i>et als</i> , "	9,635 10
Mary F. Corbett, "	2,901 86
Filling and rolling Gold street, be- tween B street and New England Railroad	493 85
Work on buildings	66 41
Filling	582 00
Paving Division pay-rolls	476 66
Engineers' pay-roll	2 50

Total expended January 31, 1898, ...	<u>\$27,223 38</u>
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Balance January 31, 1897	\$18,569 33
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January, 1898, transferred from Surplus Revenue, ...	2,654 05
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To be provided for in 1898	<u>6,000 00</u>
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Expended	<u>\$27,223 38</u>
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Harvard-street bridge, reconstruction (over New England Railroad).

Constructing new sidewalk at side of, and in addition to, old bridge.

Carpenters	\$167 71	
Lumber	59 61	
Repairing bridge, sidewalk girders, etc.	118 48	
Bolts	9 40	
Paid New England Railroad for privilege	1 00	
Total expended January 31, 1898,		\$356 20
Balance		2,643 80
Appropriation		<u>\$3,000 00</u>

Leyden-street bridge, reconstruction (over Boston, Revere Beach & Lynn Railroad).

Put in new deck, sheathed the same, laid new sidewalk and painted bridge.

Carpenters	\$476 61	
Painters	310 17	
Lumber	124 22	
Paint-oil mixer	39 00	
Car fares	50 00	
Total expended January 31, 1898		<u>\$1,000 00</u>
[Appropriation \$1,000.]		

Balance of expense paid out of regular appropriation.

Meridian-street bridge, reconstructing draw (from East Boston to Chelsea).

Repaired draw machinery and patched sheathing.

Repairing draw machinery, new bolts, washers, straps, rack-plates, shafts, gears, etc.	\$1,780 51	
Carpenters	53 10	

Total expended January 31, 1898	\$1,833 61	
April, 1897, transferred to Leyden-street bridge, reconstruction	1,000 00	
Appropriation		<u>\$2,833 61</u>

RECONSTRUCTION OF BRIDGES.

Beacon-street bridge (over Boston & Albany Railroad).

Reconstructed Westerly roadway, new beams, new deck and sheathing, cleaned and painted all ironwork.

Carpenters	.	.	.	.	.	\$643	00
Painters	.	.	.	.	.	152	50

\$795 50

[Not completed.]

Congress-street bridge (over Fort Point channel).

Repaired deck under roadway, also sidewalk.

Carpenters	.	.	.	.	.	.	545	18
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[Not completed.]

Hyde Park-avenue bridge (over Stony brook).

Built new bridge.

Carpenters	.	.	.	.	.	.	543	94
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[Not completed.]

Total expended January 31, 1898 .	.	\$1,884	62
Balance .	.	11,615	38

Appropriation .	.	\$13,500	00
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Reconstruction of Essex-street bridge (from Brighton to Cambridge).

Contract with Wm. S. Rendle, making repairs.

Part payment of second and final estimate \$1,446 57

Inspector .	.	.	.	.	.	84	00
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Total expended January 31, 1898 .	.	\$1,530	57
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[Appropriation \$1,530.57.]

[Balance of final estimate or \$903.68 was paid out of regular appropriation.]

Warren bridge, reconstruction (from Boston to Charlestown).

Decked and sheathed up-stream draw, repaired guard and painted ironwork.

Carpenters	.	.	.	.	.	\$442	13
Painters	.	.	.	.	.	314	10
Lumber	.	.	.	.	.	418	77

Carried forward,

\$1,175 00

<i>Brought forward,</i>		\$1,175 00
Car fares	\$25 00	
Pulling ten old piles, refitting ten spur-shores, hard pine and iron to recap guard and furnishing and driving eleven oak piles	800 00	
Total expended January 31, 1898		<u>\$2,000 00</u>
[Appropriation \$2,000.]		

AMOUNTS CHARGED TO SPECIAL APPROPRIATIONS IN CHARGE OF
OTHER DIVISIONS.

Congress-street bridge (over Fort Point channel).

Repaired and built sidewalk on South Boston end and sheathed draw.		
Carpenters	\$542 94	
Lumber (nails from yard)	363 67	
Laying 4-inch tar concrete sidewalk, 3 layers	311 85	
Charged to Congress and L streets		<u>\$1,218 46</u>

Jeffries Point. Public Landing, East Boston.

Use of wharf, fitting up raft and placing same in position, and furnishing chains for the year 1897.		
Charged to City Council, Incidental Expenses . .		<u>\$300 00</u>

Ipswich-street bridge (over water-way).

First approximate estimate of work done and material furnished on retaining-walls, abutments and piers by Holbrook, Cabot & Daly, under contract dated November 29, 1897.		
Charged to Laying out and construction of Highways		<u>\$4,922 86</u>

Broadway Bridge (over Fort Point channel).

Reconstructed the draw, completing work commenced in 1896.

Repairing draw machinery, angles, pipe, etc.	\$243 36	
Ironwork, bolts, dogs, straps, etc.	84 23	
Lag screws, bolts, washers, augers, etc. . . .	23 16	
Repairing iron fence on draw	276 48	
Teaming	22 50	
Spikes and nails	41 60	

<i>Carried forward,</i>		\$691 33
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<i>Brought forward,</i>		\$691 33
Paint, lead and oil	\$99 41	
Lumber	1,191 03	
Calking deck	258 86	
Charged to Street Improvements, Ward 13 . . .		\$2,240 63
Essex-street bridge (from Brighton to Cambridge).		
Contract for additions to draw-tenders' house, and extra work allowed.		
Charged to Street Improvements, Ward 25 . . .		\$485 00
Cornwall-street bridge (over Stony brook).		
Put in new deck and sheathed the same.		
Carpenters	\$78 18	
Nails	3 80	
		\$81 98
[Not completed].		
Elmwood-street bridge (over Stony brook).		
Patched deck, sheathed, and repaired sidewalk.		
Carpenters	\$134 43	
Lumber	125 69	
Bolts	3 75	
		263 87
[Not completed.]		
Hyde Park-avenue bridge (over Stony brook).		
Built new bridge.		
Carpenters		87 55
(Labor also charged to Reconstruction of Bridges).		
[Not completed.]		
Keyes-street bridge (over Stony brook.)		
Put in new deck and sheathed the same.		
Carpenters	\$115 76	
Nails	7 40	
Bolts	1 00	
		124 16
[Not completed.]		
Linden Park-street bridge (over Stony brook).		
Patched deck and sheathed same.		
Carpenters	\$83 98	
Lumber	61 80	
Nails	5 40	
Bolts	2 75	
		153 93
Charged to Stony brook Improvement		\$711 49

LIST OF BOSTON BRIDGES.

I. — BRIDGES WHOLLY SUPPORTED BY BOSTON.

[In the list those marked with an asterisk (*) are over navigable waters, and are each provided with a draw.]

In charge of Bridge Division.

- Allston, over Boston & Albany Railroad at Cambridge street, Brighton.
Ashland street, over N. Y., N. H. & H. Railroad, Providence Division, West Roxbury.
Athens street, over New England Railroad.
Baker street, at Brook farm, West Roxbury.
Beacon street, over outlet to Back Bay Fens.
Beacon street, over Boston & Albany Railroad.
Berkeley street, over Boston & Albany Railroad.
Berkeley street, over N. Y., N. H. & H. Railroad, Providence Division.
Berwick park (foot bridge), over N. Y., N. H. & H. Railroad, Providence Division.
Blakemore street, over N. Y., N. H. & H. Railroad, Providence Division.
Bolton street, over New England Railroad.
Boylston avenue, over Stony brook, West Roxbury.
Boylston street, over Boston & Albany Railroad.
*Broadway, over Fort Point channel.
Broadway, over Boston & Albany Railroad.
Brookline avenue, over Boston & Albany Railroad.
Byron street, over Boston, Revere Beach & Lynn Railroad.
*Charles river, from Boston to Charlestown.
*Chelsea (South), over south channel, Mystic river.
*Chelsea street, from East Boston to Chelsea.
Columbus avenue, over Boston & Albany Railroad.
*Commercial Point, or Tenean, Dorchester.
*Congress street, over Fort Point channel.
Cornwall street, over Stony brook, West Roxbury.
Cottage Farm, over Boston & Albany Railroad, at Commonwealth avenue.
Cottage street (foot-bridge), over flats, East Boston.
Dartmouth street, over Boston & Albany, and Providence Division of N. Y., N. H. & H. Railroad.
*Dover street, over Fort Point channel.
Elmwood street (private way), over Stony brook, Roxbury.
*Federal street, over Fort Point channel.
Ferdinand street, over Boston & Albany Railroad.
Florence street, over Stony brook, West Roxbury.
Gold street (foot-bridge), over New England Railroad.

Huntington avenue, over Boston & Albany Railroad.
 Hyde Park avenue, over Stony brook, West Roxbury.
 Irvington street (foot-bridge), over N. Y., N. H. & H. Railroad,
 Providence Division.
 Keyes street, over Stony brook, West Roxbury.
 *L street, over reserved channel at junction of Congress and L
 streets.
 Leyden street, over Boston, Revere Beach & Lynn Railroad.
 Linden Park street, over Stony brook, Roxbury.
 *Malden, from Charlestown to Everett.
 Massachusetts avenue, over Boston & Albany Railroad.
 Massachusetts avenue, over N. Y., N. H. & H. Railroad, Provi-
 dence Division.
 *Meridian street, from East Boston to Chelsea.
 *Mt. Washington avenue, over Fort Point channel.
 Shawmut avenue, over Boston & Albany Railroad.
 Swett street, east of New England Railroad.
 Swett street, west of New England Railroad.
 Texas street, over Stony brook, Roxbury.
 *Warren, from Boston to Charlestown.
 West Newton street, over N. Y., N. H. & H. Railroad, Provi-
 dence Division.
 West Rutland-square (foot-bridge), over N. Y., N. H. & H. Rail-
 road, Providence Division.
 Williams street, over Stony brook, West Roxbury.
 Winthrop, from Breed's Island to Winthrop.

In charge of Park Department.

Agassiz, in Back Bay Fens.
 Aborway, over Stony brook.
 Audubon road, over Boston & Albany Railroad.
 Bernier street (foot-bridge), in the Riverway.
 Boylston street, in Back Bay Fens.
 Bridle path, in the Riverway, over Muddy river.
 *Castle Island (foot-bridge), from Marine park, South Boston, to
 Castle Island.
 Charlesgate, Back Bay Fens, over Boston & Albany Railroad.
 Circuit drive, over Scarboro' pond, in Franklin park.
 Commonwealth avenue, in Back Bay Fens.
 Ellicott arch, in Franklin Park.
 Fen, Back Bay Fens.
 Forest Hills entrance, in Franklin park.
 Leverett pond (foot-bridge), in Leverett park.
 Neptune road, over Boston, Revere Beach & Lynn Railroad.
 Scarboro' pond (foot-bridge), in Franklin park.
 Stony brook, Back Bay Fens.

In charge of Public Grounds Department.

Public Garden (foot-bridge).

II. — BRIDGES OF WHICH BOSTON SUPPORTS THE PART WITHIN ITS LIMITS.

In charge of Bridge Division.

- *Cambridge street, from Brighton to Cambridge.
- Central avenue, from Dorchester to Milton.
- *Chelsea (North), from Charlestown to Chelsea.
- *Essex street, from Brighton to Cambridge.
- *Granite, from Dorchester to Milton.
- Mattapan, from Dorchester to Milton.
- Milton, from Dorchester to Milton.
- *Neponset, from Dorchester to Quincy.
- *North Beacon street, from Brighton to Watertown.
- *North Harvard street, from Brighton to Cambridge.
- Spring street, from West Roxbury to Dedham.
- *Western avenue, from Brighton to Cambridge.
- *Western avenue, from Brighton to Watertown.

In charge of Park Department.

- Bellevue street, in the Riverway, over Muddy river.
- Bernier street (foot-bridge), in the Riverway, over Muddy river.
- Brookline avenue, in the Riverway, over Muddy river.
- †Longwood avenue, from Roxbury to Brookline.
- Tremont street, in the Riverway, over Muddy river.

III. — BRIDGES OF WHICH BOSTON PAYS A PART OF THE COST OF MAINTENANCE.

In charge of Bridge Division.

- Albany street, over Boston & Albany Railroad.
- Chelsea bridge, over Boston & Maine Railroad.
- Dorchester street, over N. Y., N. H. & H. Railroad, Plymouth Division.
- Everett street, over Boston & Albany Railroad, Brighton.
- West Fourth street, over N. Y., N. H. & H. Railroad, Plymouth Division.

In charge of Commissioners of Cambridge Bridges.

- *Canal, from Boston to Cambridge.
- *Harvard, from Boston to Cambridge.
- *Prison Point, from Charlestown to Cambridge.
- *West Boston, from Boston to Cambridge.

IV. — BRIDGES SUPPORTED BY RAILROAD CORPORATIONS.

1st. — Boston & Albany Railroad.

- Harrison avenue.
- Market street, Brighton.
- Tremont street.
- Washington street.

† To be rebuilt and maintained by Park Departments of Boston and Brookline, by Act of Legislature.

2d. — Boston & Maine Railroad, Eastern Division.

Main street.

Mystic avenue.

3d. — Boston & Maine Railroad, Western Division.

Main street.

Mystic avenue.

4th. — Boston, Revere Beach & Lynn Railroad.

Everett street.

5th. — New England Railroad.

Dorchester avenue.

Harvard street, Dorchester.

Morton “ “

Norfolk “ “

Norfolk “ “

Silver street.

Washington street, Dorchester.

West Broadway.

West Fifth street.

West Fourth street.

West Second street.

West Sixth street.

West Third street.

6th. — New York, New Haven & Hartford Railroad, Plymouth Division.

Adams street.

Ashmont street and Dorchester avenue.

Cedar Grove Cemetery.

Freeport street.

Savin Hill avenue.

7th. — New York, New Haven & Hartford Railroad, Providence Division.

Beech street, West Roxbury.

Bellevue street, West Roxbury.

Canterbury street, West Roxbury.

Centre and Mt. Vernon streets, West Roxbury.

Dudley avenue, West Roxbury.

Park street, West Roxbury.

RECAPITULATION OF BRIDGES.

I. Number wholly supported by Boston :		
In charge of Bridge Division	54	
In charge of Park Department	17	
In charge of Public Grounds Department	1	
	—	72
II. Number of which Boston supports the part within its limits :		
In charge of Bridge Division	13	
In charge of Park Department	5	
	—	18
III. Number of which Boston pays a part of the cost of maintenance :		
In charge of Bridge Division	5	
In charge of Commissioners of Boston and Cambridge Bridges	4	
	—	9
IV. Number supported by railroad corporations :		
1. Boston & Albany	4	
2. Boston & Maine, Eastern Division	2	
3. Boston & Maine, Western Division	2	
4. Boston, Revere Beach & Lynn	1	
5. New England	13	
6. New York, New Haven & Hartford, Plymouth Division	5	
7. New York, New Haven & Hartford, Providence Division	6	
	—	33
Total number		<u>132</u>

List of Small Bridges or Culverts having Wooden Tops, which are repaired by Bridge Division.—Walls Repaired and Openings cleaned by Sewer Division.

LOCATION.	Span. <i>Feet.</i>	Height of Opening. <i>Feet.</i>	Length. <i>Feet.</i>	Side-walls.	Covering.
Askland street and Canterbury, near Calvary Cemetery, West Roxbury.	7.6	5.5	75	Stone.....	Wood.
Beech street, near Anawan avenue, at Central station, West Roxbury.	4.0	4.0	50	Stone.....	Wood.
Cass street, near Spring-street station, West Roxbury.....	7.0	3.0	21	Stone.....	Wood.
Colasset street, Roslindale.....	14.0	7.5	60	Stone.....	Wood.
Gardner street, near Cow Island, West Roxbury.....	5.0	5.5	33	Wood.....	Wood.
Jamaica street, Jamaica Plain.....	10.0	4.0	39	Stone.....	Wood.
Park street, west of Dorchester avenue, Dorchester.....	5.0	3.7	50	Stone.....	Wood.
Park street, west of N. Y. & H. Railroad, Dorchester.....	8.5	5.0	50	Stone.....	Wood.
Powell street, near Spring-street station, West Roxbury.....	12.0	3.0	65	Stone.....	Wood.
Spring street, near Spring-street station, West Roxbury.....	2.7	2.7	63	Stone.....	Wood.
Summer street, near Spring-street station, West Roxbury.....	4.0	4.5	40	Stone.....	Wood.
Williams street, at Stony brook, West Roxbury.....	5.0	5.0	50	Wood.....	Wood.
Woodman street, Jamaica Plain.....	6.3	4.0	65	Stone.....	Wood.

PUBLIC LANDING-PLACES.

The following public landing-places have been built by the city, and are maintained and controlled by the Street Department :

Charles-river Bridge.—Size, 40×60 . Built in 1890. Moored from city's property.

Essex-street Bridge.—Size, 9×23 . Built in 1890. Moored from city's property.

East Boston, Public Landing.—Size, 18×30 . Built in 1893. Moored at dock of East Boston Dry Dock Company. Dock and flats leased at \$250 per year.

Commercial Wharf.—Size, 30×50 . Built by M. F. Sullivan; contract dated January 1, 1892. Moored at dock of Commercial Wharf Corporation. Dock and flats leased November 30, 1891, at \$1,000 per year.

Federal-street Bridge.—Size, 20×30 . Built by M. F. Sullivan, October 26, 1892. Moored from city's property.

CABLE-HOUSES AND BOXES.

The following is a list of cable-houses and boxes on bridges in charge of this division :

New England Telephone and Telegraph Company :

Charles-river bridge, 2 houses, 1 unused box.

Chelsea [South] bridge, 1 house.

Congress-street bridge, 2 houses.

Dover-street bridge, 2 houses or boxes.

Chelsea [North] bridge, 1 box.

Chelsea-street bridge, 1 box.

Malden bridge, 4 boxes.

Meridian-street bridge, 2 boxes.

Neponset bridge, 2 boxes on poles.

Warren bridge, 2 boxes.

American Telephone and Telegraph Company :

Federal-street bridge, 1 house.

Merchants' Telegraph Company :

Congress-street bridge, 2 boxes.

Postal Telegraph Cable Company :

Congress-street bridge, 2 houses.

Malden bridge, 2 boxes.

Warren bridge, 2 boxes.

Boston Electric Light Company :

Congress-street bridge, 2 boxes.

West End Street Railway Company :

Cambridge-street bridge, 1 house.

Dover-street bridge, 1 house, 1 box.

Federal-street bridge, 2 houses.

Malden bridge, 2 houses.

Warren bridge, 2 houses.

Lynn & Boston Railroad Company :

Chelsea [North] bridge, 4 boxes.

Chelsea [South] bridge, 8 boxes.

Boston Police Department :

Chelsea [South] bridge, 1 box.

Malden bridge, 2 boxes.

Boston Fire Department :

Chelsea [North] bridge, 1 box.

Dover-street bridge, 1 house, 1 box.

Meridian-street bridge, 2 boxes.

Warren bridge, 2 boxes.

On Warren bridge there are also five small boxes; the owners of the same are unknown.

**Statement of Traffic on Thursday, October 7, 1897, between
the hours of 6 A.M. and 7 P.M.**

North Bridges.

NAME OF BRIDGE.	Foot passengers from Boston.	Foot passengers to Boston.	Teams from Bos- ton.	Teams to Boston.	Street cars from Boston.	Street cars to Bos- ton.
Charles river.....	7,449	5,437	2,215	1,983		
Chelsea (North).....	795	1,036	754	863	334	350
Chelsea (South).....	1,448	1,181	789	749	335	347
Malden.....	379	570	701	842	368	328
Meridian street....	1,157	1,164	444	507	122	123
Warren	4,576	5,024	2,682	3,156	1,193	1,262

South Bridges.

Broadway	3,340	5,415	1,070	1,630	43	91
Congress street.....	6,030	6,780	3,580	3,750		
Dover street.....	5,235	5,448	964	1,019	251	257
Federal street.....	3,060	3,425	620	1,090	438	476
L street.....	945	1,040	240	310		
Mt. Washington avenue.....	1,598	1,734	953	760		

Mt. Washington avenue.....	64	10	74	2,858	928	3,786	5,484	959	6,443	2,062	447	2,509	10,408	2,344	12,812	3,088	7,069
Neponset.....				57	.....	57	245	9	254	66	.....	66	368	9	377	61	237
North Beacon street.....																	
North Harvard street.....				77	3	80	621	51	672	890	98	988	1,588	152	1,740	494	772
Warren.....	33	8	41	1,660	816	2,476	2,364	617	2,981	1,331	435	1,766	5,388	1,876	7,264	2,074	5,162
Western ave. to Cambridge ..				92	11	103	534	31	565	317	15	332	943	57	1,000	178	618
Western ave. to Watertown ..				7	.....	7	108	.....	108	58	.....	58	173	.....	173	35	113
Totals.....	419	80	499	20,323	6,519	26,842	45,653	8,229	53,882	20,429	4,663	25,092	86,824	19,491	106,315	24,793	67,577

¹ West Boston, Prison Point, Canal (or Craigie's), and Harvard bridges, not included in these tables, being in the care of commissioners representing the two cities (Boston and Cambridge) connected by these bridges.

Table showing the Widths of Openings for Vessels in all Bridges provided with Draws in the City of Boston, Jan. 31, 1898.

NAME OF BRIDGE.	Location.	Number of Openings.	Width.
Boston & Maine R.R., Eastern Division	Boston to Charlestown	1	39 feet 8 inches.
Boston & Maine R.R., Eastern Division	Over Miller's river	1	35 " 6 "
Boston & Maine R.R. (freight), Southern Division	Boston to East Cambridge	1	40 " 2 "
Boston & Maine R.R. (passenger), Southern Division	" "	1	39 " 7 "
Boston & Maine R.R., Western Division	Boston to Charlestown	1	39 " 7 "
Boston & Maine R.R., Western Division	Over Miller's river	1	35 " 10 "
Broadway	Over Fort Point channel ..	1	43 " 3 "
Cambridge street	Brighton to Cambridge....	1	36 " 4 "
Canal (or Craigie's).	Boston to East Cambridge.	1	36 " 0 "
Charles river	Boston to Charlestown	1	36 " 0 "
Chelsea (south channel).....	Charlestown to Chelsea....	1	38 " 9 "
Chelsea (north channel).....	" "	1	44 " 10 "
Chelsea st. (East Boston side)....	East Boston to Chelsea	2	36 " 0 "
Chelsea street (Chelsea side)	" "	..	36 " 0 "
Commercial Point (or Tenean)...	Dorchester	1	24 " 0 "
Congress street (Boston side)....	Over Fort Point channel ..	2	43 " 3 "
" (South Boston side)...	" "	..	43 " 9 "
Dover street	" "	..	37 " 0 "
Essex street	Brighton to Cambridge ...	1	35 " 9 "
Federal street	Over Fort Point channel...	1	41 " 10 "
Fitchburg R.R.	Boston to Charlestown	1	36 " 0 "
Fitchburg R.R. (for teaming freight)	" "	1	36 " 0 "
Grand Junction R.R.	Brighton to Cambridge....	1	35 " 9 "
" "	East Boston to Chelsea....	1	34 " 6 "
Granite	Dorchester to Milton	1	36 " 0 "
Harvard (Boston side).....	Boston to Cambridge	2	35 " 6 "
" (Cambridge side).....	" "	..	36 " 10 "
L street	Over Reserved channel, South Boston	1	40 " 0 "
Malden	Charlestown to Everett....	1	43 " 4 "

Table showing Width of Openings, etc. — *Concluded.*

NAME OF BRIDGE.	Location.	Number of Openings.	Width.
Meridian st. (East Boston side) ..	East Boston to Chelsea	2	59 feet 2 inches
“ (Chelsea side)	“ “	..	59 “ 0 “
Mt. Washington avenue (Boston side)	Over Fort Point channel ..	2	42 “ 3 “
Mt. Washington avenue (South Boston side)	“ “	..	42 “ 3 “
Neponset	Dorchester to Quincy	1	36 “ 0 “
New England R.R. (Boston side).	Over Fort Point channel ..	2	41 “ 5 “
New England R.R. (South Boston side)	“ “	..	40 “ 4 “
New England R.R.	Over South Bay	1	28 “ 4 “
North Beacon street	Brighton to Watertown....	1	30 “ 3 “
North Harvard street	Brighton to Cambridge....	1	36 “ 0 “
New York, New Haven & Hartford R.R.	Over Fort Point channel ..	1	36 “ 3 “
New York, New Haven & Hartford R.R.	Dorchester to Quincy	1	35 “ 10 “
Prison Point	Charlestown to Cambridge	1	36 “ 0 “
Warren	Boston to Charlestown	1	36 “ 0 “
West Boston (Boston side)	Boston to Cambridge	2	35 “ 6 “
“ (Cambridge side) ..	“ “	..	36 “ 6 “
Western avenue	Brighton to Cambridge....	1	36 “ 0 “
“	Brighton to Watertown....	1	35 “ 10 “

Table showing Width of Bridges, kind of Roadways, Sidewalks, etc., on Tide-water Bridges, Jan. 31, 1898.

NAME OF BRIDGE.	Width of Bridge.	ROADWAY.		SIDEWALKS.		
		Width.	Kind of Roadway.	No.	Width.	Kind of Walks.
	<i>Ft. In.</i>	<i>Ft. In.</i>			<i>Ft. In.</i>	
Broadway	60 0	40 0	Plank	2	10 0	Coal-tar concrete.
Cambridge street	40 0	32 2	"	1	6 0	Plank.
Canal	64 0	48 0	Paved	2	8 0	Brick.
Charles river.....	50 0	34 0	"	2	8 0	"
Chelsea, North.....	49 0	40 0	"	1	8 0	Coal-tar concrete and plank.
" South.....	50 3	41 2	"	1	8 0	Plank.
" street	30 0	23 2	Plank	1	6 0	"
Commercial point.....	about 34 0	about 27 0	"	0		
Congress street	60 0	44 0	Paved	2	8 0	Coal-tar concrete.
Dover st. (over water)	60 0	40 0	"	2	10 0	Asphalt.
Essex street.....	31 0	22 8	Plank	1	7 6	Plank.
Federal street.....	69 0	49 0	Paved	2	10 0	Asphalt.
Granite	30 2	24 4	Plank	1	5 0	Plank.
Harvard	69 4	51 0	"	2	9 2	Asphalt.
L street	60 0	44 0	Paved	2	8 0	"
Malden.....	40 0	32 0	"	1	7 0	Coal-tar concrete.
Meridian street	50 0	36 0	"	2	7 0	" "
Mt. Washington ave. .	61 0	39 6	"	2	10 9	" "
Neponset	30 0	23 10	Plank	1	5 5	Plank.
North Beacon street ..	31 0	25 2	"	1	5 0	"
North Harvard street.	28 2	26 7	"	0		
Prison Point.....	50 0	36 0	{ Plank part } { Paved part }	2	7 0	Coal-tar concrete.
Warren	80 0	60 0	Paved	2	10 0	" "
Western ave. to Cambridge	33 2	26 3	Plank	1	6 0	Plank.
Western ave. to Watertown	33 0	24 2	"	1	8 0	"
Winthrop	24 2	19 10	"	1	3 7	"
West Boston	50 0	36 0	Paved	2	7 0	Brick.

DRAW-TENDERS' REPORTS.¹

giving the Number of Vessels passing through the Drawbridges controlled by the City of Boston during the Years 1893, 1894, 1895, 1896 and 1897.

NAME OF BRIDGE.	STEAMERS.					SAILING VESSELS.					TUGS.					ALL OTHERS.					TOTAL NUMBER OF VESSELS.					TOTALS.
	1898.	1894.	1895.	1896.	1897.	1898.	1894.	1895.	1896.	1897.	1898.	1894.	1895.	1896.	1897.	1898.	1894.	1895.	1896.	1897.	1898.	1894.	1895.	1896.	1897.	
roadway	8	6	16	22	8	2,959	2,800	3,115	3,082	2,995	1,840	1,935	2,279	2,358	3,507	664	795	816	890	1,209	5,471	5,536	6,226	6,352	7,719	31,304
bridge street .....	.....	.....	.....	.....	.....	149	109	150	133	125	608	523	599	572	710	186	205	181	217	396	943	837	930	922	1,231	4,863
Charles river	30	34	45	39	48	2,690	2,503	2,815	2,857	2,576	3,175	2,942	3,641	4,121	4,257	2,352	2,271	2,402	2,534	2,926	8,247	7,750	8,993	9,551	9,807	44,348
Chelsea (North)	57	66	115	159	93	898	1,141	995	1,169	978	3,422	3,841	4,662	4,373	5,186	1,697	1,631	2,383	2,229	2,799	6,074	6,679	8,155	7,930	9,056	37,894
Chelsea (South)	80	51	31	39	46	1,130	850	847	1,260	1,345	2,540	1,810	2,275	2,748	3,373	1,328	1,083	984	914	993	5,078	3,794	4,137	4,961	5,757	25,727
Chelsea street .....	.....	6	...	6	...	14	57	24	30	19	35	159	105	163	138	20	116	41	105	80	69	338	170	304	237	1,118
Commercial Point .....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1	.....	2	.....	.....	1	3
Congress street	361	277	383	292	113	4,671	4,080	4,174	4,264	4,318	7,411	7,626	7,886	8,347	9,745	2,694	2,850	2,838	3,059	3,541	15,137	14,833	15,281	15,962	17,717	78,930
Cover street	6	6	16	20	6	2,415	2,355	2,894	2,871	2,813	1,574	1,557	1,999	2,146	3,009	618	711	712	741	975	4,613	4,629	5,621	5,778	6,803	27,444
Cross street	23	4	...	4	1	180	134	158	238	174	717	639	721	685	788	218	244	242	295	422	1,138	1,021	1,121	1,222	1,385	5,887
Federal street	9	6	16	17	6	3,199	3,017	3,366	3,393	3,199	2,231	2,261	2,666	2,941	4,025	703	816	848	1,083	1,226	6,142	6,100	6,896	7,434	8,456	35,028
Granite street .....	.....	.....	.....	.....	.....	109	82	126	64	58	237	220	306	240	258	24	37	41	55	63	370	339	473	359	379	1,920
Harvard street .....	.....	4	2	18	4	.....	678	541	730	673	.....	2,754	3,132	2,556	2,066	.....	1,335	2,128	1,128	1,219	.....	4,971	5,803	4,432	3,962	19,168

¹ West Boston, Prison Point, Canal (or Craigie's) and Harvard Bridges not included in these tables, being in the care of commissioners representing the two cities of Boston and Cambridge connected by these bridges.

Draw-Tenders' Reports. — Concluded.

NAME OF BRIDGE.	STEAMERS.					SAILING VESSELS.					TUGS.					ALL OTHERS.					TOTAL NUMBER OF VESSELS.					TOTALS. Feb. 1, 1893, to Feb. 1, 1898.
	1893.	1894.	1895.	1896.	1897.	1893.	1894.	1895.	1896.	1897.	1893.	1894.	1895.	1896.	1897.	1893.	1894.	1895.	1896.	1897.	1893.	1894.	1895.	1896.	1897.	
Malden	5	8	2	4	2	260	369	273	352	450	1,107	1,226	1,619	1,384	1,652	478	574	1,236	961	1,059	1,850	2,168	3,130	2,701	3,163	13,012
Meridian street...	44	47	58	51	57	771	846	818	653	610	3,736	4,030	4,046	4,391	4,145	1,746	2,088	2,031	1,954	2,464	6,297	7,011	6,953	7,049	7,276	34,586
Mt. Washington avenue.....	79	87	69	88	74	3,822	3,432	3,639	3,700	3,786	4,741	4,782	5,119	5,426	6,443	2,089	2,246	2,229	2,304	2,509	10,731	10,547	11,116	11,518	12,812	56,724
Neponset	...	...	...	...	...	131	105	148	66	57	244	224	306	250	254	31	40	47	60	66	406	369	501	376	377	2,029
No. Beacon street..	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	2	...	...	...	...	2
No. Harvard street.	...	...	...	...	...	54	64	96	92	80	131	108	224	279	672	36	36	35	72	988	221	268	355	443	1,740	3,027
Warren	7	63	47	42	41	2,655	2,081	2,312	2,220	2,476	1,983	2,124	2,588	3,007	2,981	1,520	1,639	2,007	2,143	1,766	6,165	5,967	6,954	7,512	7,264	33,862
Western avenue to Cambridge	...	2	...	...	...	132	95	115	114	103	481	426	485	451	565	137	153	136	158	332	750	676	736	723	1,000	3,885
Western avenue to Watertown	...	...	...	...	...	6	7	.....	36	7	18	28	7	102	108	14	20	7	45	58	38	55	14	183	173	463
Totals.....	710	667	800	801	499	26,245	24,797	26,666	27,424	26,842	36,232	39,275	44,665	46,540	53,882	16,555	19,151	21,434	20,947	25,092	79,742	88,800	93,565	95,712	106,315	459,224

APPENDIX B.

REPORT OF THE DEPUTY SUPERINTENDENT OF
THE FERRY DIVISION.

NORTH FERRY, EAST BOSTON, February 1, 1898.

MR. BENJ. W. WELLS,

Superintendent of Streets :

DEAR SIR: I respectfully submit the annual report of the expenditures, income and operation of the Ferry Division of the Street Department for the financial year ending January 31, 1898:

South Ferry, East Boston side, located at the termination of Lewis street, covering an area of 58,725 square feet of land and water. On these premises are one head-house, one coal-shed, one work-shop for carpenters, machinists and blacksmith, one gate-room and oil-room, all in a very poor condition. Three piers which form the two ferry-slips, two drops and tanks, and one dock where boats are laid when not in use or while undergoing repairs.

South Ferry, Boston side, located at the termination of Eastern avenue, covering an area of 28,135 square feet of land and water, upon which is one head-house with canopies extending over driveways, one gate-room, three piers which form the two slips, and two drops and tanks.

The wharf property adjoining these premises was leased by the Ferry Department in 1881 for 999 years, at a rental of \$4,000 per year. The whole of it is sub-let to the Public Institutions Department for \$2,000 per year, making a net loss to this division of \$2,000 a year, which should be borne by Public Institutions Department.

North Ferry, Boston side, located at the termination of Battery street, covering an area of 45,000 square feet of land and water, upon which are one head-house with canopies, one gate-room and steam-room, three piers which form the two slips, and two drops and tanks.

North Ferry, East Boston side, located at termination of Border street, covering an area of 62,138 square feet of land and water, upon which are one head-house with canopy, boiler-room, oil-room, stable and coal-shed, three piers, which form the two slips, two drops and tanks.

There are eight drops. One new drop and tank have been built and put in place during the past year at South Ferry, East Boston side, and the City Engineer recommends that two more be built and placed in position. When this is done all the drops will be then practically new.

There are twelve piers, only two of which are in good condition, and extensive repairs should be made on the rest. Those at South Ferry, on both sides, are in very poor condition, especially on Boston side, where the south pier must be entirely rebuilt.

The head-houses are all in good condition, with the exception of the one at South Ferry, East Boston side. Plans have been drawn for a new head-house and coal shed, and for the rearrangement of the slips at this landing, and it is hoped that before long this terminal will be equal, if not superior, to any of the others.

I again repeat my recommendation of last year that Battery street be widened from Commercial street to the ferry gates.

There are seven ferry-boats in use in this division, six of them week days and three on Sunday. One is a spare boat.

During the past year two of the boats the "Hugh O'Brien" and "East Boston" have been hauled out on railway and calked and coppered at a cost of almost \$4,000. A new propeller boat is undergoing construction and will be in commission about May 1, 1898. It will take the place of the "Ben Franklin," which has outlived its usefulness. The other five boats are in very good condition. The end of the "Hugh O'Brien" has been built up the past year, making her good for some time to come.

A new modern boat should be built to take the place of the "Winthrop," which is now twenty-five years old.

During the past year every boat (with the exception of "Ben Franklin") has been thoroughly overhauled, both machinery and woodwork, and painted throughout. Electric lights have been installed on three of the boats as provided for by a special appropriation, making five of the seven boats equipped with electric lights.

Electric motors have been installed at all the landings, and it is now possible on this account to make schedule running time, regardless of weather conditions.

The south pier at North Ferry, East Boston side, has been completely overhauled and repaired at a cost of \$2,000. This was imperative, as the pier was in a dangerous condition.

The landing at the South Ferry, East Boston side, was raised about 14 inches, this will prevent any but an extraordinary high tide rising over the landing. Previously

any little increase in the tide necessitated the use of planks in order that passengers might reach the boats.

By reference to the financial and travel schedules you will see that the increase of receipts was \$4,369.60, increase of foot travel over 431,000 and of team travel 23,500.

Respectfully yours,

WILLIAM F. McCLELLAN,
Deputy Superintendent.

FINANCIAL STATEMENT.

REGULAR ANNUAL AND SPECIAL APPROPRIATIONS OF STREET DEPARTMENT, FERRY DIVISION FOR YEAR ENDING JANUARY 31, 1898.

Appropriation for year ending January 31, 1898	\$220,000 00
Amount of expenditures	\$219,983 24
Amount transferred to Paving Division	16 76
	<u>\$220,000 00</u>

OBJECTS OF EXPENDITURE.

Salaries and wages for maintenance	\$130,691 30
Salaries and wages for repairs	17,851 52
Current expenses	19,684 10
Fuel	32,027 41
Supplies for maintenance	4,875 19
Supplies for repairs	3,100 54
Repairs on boats	9,791 90
Repairs on buildings, piers and drops	1,297 96
Damages to persons and property	136 00
Tools and fixtures	407 32
Incidental expenses	120 00
	<u>\$219,983 24</u>
Unexpended balance transferred to Street Department, Paving Division	16 76
	<u>\$220,000 00</u>

SPECIAL APPROPRIATIONS.

Appropriation authorized for new ferry-landings, head-house and new boats	<u>\$500,000 00</u>
Amount issued during year ending	
January 31, 1897	\$30,000 00
Amount issued during year ending	
January 31, 1898	102,800 00
Total amount issued	<u>\$132,800 00</u>

OBJECTS OF EXPENDITURES.

Amount expended as per annual report of 1896	\$21,961 61
Wm. McKie, on contract for building three drops	\$6,474 57
Installing three electric motors on landings	4,070 00
R. F. Keough, plans and specifications for double screw ferry-boat	1,600 00
John M. Brooks, new tank for drop	1,737 50
Wm. McKie, first payment on contract for double screw ferry-boat	15,000 00
John M. Brooks, new ferry-drop	5,383 50
Sundry bills for construction	9,914 76
	44,180 33
Total expended	\$66,141 94
Balance	433,858 06
	<u>\$500,000 00</u>
Expended of amount issued	\$66,141 94
Balance of amount issued	66,658 06
	<u>\$132,800 00</u>
Appropriation for installing electric lights on ferry- boats	<u>\$8,000 00</u>

OBJECTS OF EXPENDITURE.

Public Buildings Department, Electrical Construction Division :	
Electric installation on ferry-boat "Winthrop"	\$2,556 42
Electric installation on ferry-boat "Revere"	2,241 80
New appliances for construction	990 28
Sundry expenses	74 38
	\$5,862 88
Unexpended of appropriation	2,137 12
	<u>\$8,000 00</u>

TOTAL APPROPRIATIONS.

Annual maintenance	\$220,000 00
New ferry-landing, balance Feb- ruary 1, 1897	478,038 39
Installation electric lights on boats	8,000 00
	<u>\$706,038 39</u>

TOTAL EXPENDITURES.

Annual maintenance . . .	\$219,983 24	
New ferry-landing . . .	44,180 33	
Electric lights on boats . . .	5,862 88	
	\$270,026 45	
Transfer to Paving Division . . .	16 76	
		270,043 21
Unexpended . . .		\$435,995 18
New ferry-landing . . .	\$433,858 06	
Electric lights on boats . . .	2,137 12	
		<u>\$435,995 18</u>

INCOME.

Cash Receipts from February 1, 1897, to February 1, 1898.

At office of City Collector :

For rent	\$2,540 00
reimbursed damages	600 00
free ferries, July 4, 1897	25 00
sales of foot-passes	377 00
sales of team tickets	36 00

At Ferry Division office :

For old material sold	154 65
sales of foot-passes	943 80
sales of team tickets	648 50
sales of rejected coin	1 68
boat privileges to bootblacks	44 00

From Tollmen :

For 12,042,918 foot passengers at 1 cent	120,429 18
sales of team tickets	27,679 50

From Gatemen :

For 285,104 foot-passengers at 1 cent	2,851 04
ferriage of teams	15,118 86

Total receipts for year	<u>\$171,449 21</u>
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STATEMENT SHOWING RECEIPTS AT EACH FERRY.

North Ferry.

From Tollman.	Foot-Passengers, at 1 cent.	Team Tickets.	Total.
No. 2.....	\$12,552 80	\$1,915 50	\$14,468 30
" 3.....	12,185 34	1,914 00	14,099 34
" 5.....	12,437 82	2,013 00	14,450 82
" 6.....	11,989 27	1,978 50	13,967 77
" 9.....	12,315 52	1,837 50	14,153 02
" 10.....	12,319 88	1,989 00	14,308 88
" 13.....	12,421 79	1,940 00	14,361 79
	\$86,222 42	\$13,587 50	\$99,809 92

From Tollmen \$99,809 92

From Gatemen :

For 175,420 foot-passengers at 1c., \$1,754 20

ferriage of teams 6,139 63

7,893 83

Total at North Ferry \$107,703 75

South Ferry.

From Tollman.	Foot-Passengers, at 1 cent.	Team Tickets.	Total.
No. 1.....	\$8,061 54	\$3,550 00	\$11,611 54
" 4.....	7,737 40	3,347 50	11,084 90
" 7.....	8,340 57	3,359 00	11,699 57
" 8.....	7,806 76	3,475 00	11,281 76
" 11.....	1,027 22	124 50	1,151 72
" 12.....	1,233 27	236 00	1,469 27
	\$34,206 76	\$14,092 00	\$48,298 76

From Tollmen \$48,298 76

From Gatemen :

For 109,684 foot-passengers at 1c., \$1,096 84

ferriage of teams 8,979 23

10,076 07

Total at South Ferry \$58,374 83

North and South ferries, as above . . .	\$166,078 58
Tickets at office of City Collector . . .	413 00
Tickets at office of Ferry Division . . .	1,592 30
Rent	2,540 00
Reimbursed damages	600 00
Free ferries, July 4, 1897	25 00
Old material, rejected coin and bootblacks . .	200 33
Total receipts for year 1897	<u>\$171,449 21</u>

CASH STATEMENT.

*From February 1, 1897, to February 1, 1898.**Dr.*

To cash received	<u>\$171,449 21</u>
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Cr.

By amount paid City Collector . . .	\$171,454 23
“ rejected coin	6 37
	<u>\$171,449 21</u>

STATEMENT OF RECEIPTS.

From April 1, 1870 (date of purchase by the City of Boston, of the East Boston Ferries), to February 1, 1898.

Cash received for tolls from April 1, 1870, to February 1, 1894 . . .	\$3,928,874 64
Cash received for tolls from February 1, 1894, to February 1, 1895	152,950 04
Cash received for tolls from February 1, 1895, to February 1, 1896	166,307 33
Cash received for tolls from February 1, 1896, to February 1, 1897	163,769 67
Cash received for tolls from February 1, 1897, to February 1, 1898	168,083 88
	\$4,579,985 56
Cash received for rent	\$44,911 30
Cash received for old boats	15,246 71
Cash received from all other sources	9,887 31
	70,045 32
Total receipts in 27 years 10 months	<u>\$4,650,030 88</u>

CASH STATEMENT.

*From April 1, 1870 to February 1, 1898.**Dr.*

To receipts from all sources in 27 years 10 months	\$4,650,030 88
--	----------------

Cr.

By amount paid in to City Collector	\$4,649,352 20
By cash with Tollmen and Gate-men as capital	608 00
By counterfeit and rejected money in 27 years 10 months	70 68
	<u>\$4,650,030 88</u>

EXPENDITURES.

From March 4, 1857, to April 1, 1870.

Amount charged to the East Boston ferries by Auditor previous to purchase:

For avenues	\$250,000 00
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For repairs	65,815 68
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	<u>\$315,815 68</u>
--	---------------------

For ferry property, purchased April 1, 1870	276,375 00
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	<u>\$592,190 68</u>
--	---------------------

Amount of expenditure from April 1, 1870, to February 1, 1894	\$5,463,922 36
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Amount of expenditure from February 1, 1894, to February 1, 1895	224,441 04
--	------------

Amount of expenditure from February 1, 1895, to February 1, 1896	221,813 94
--	------------

Amount of expenditure from February 1, 1896, to February 1, 1897	241,057 70
--	------------

Amount of expenditure from February 1, 1897, to February 1, 1898	270,043 21
--	------------

	<u>6,421,278 25</u>
--	---------------------

	<u>\$7,013,468 93</u>
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DEDUCT.

Amount paid to City Treasury	4,649,352 20
--	--------------

Net cost of ferries to city to date, not including interest on loans	<u>\$2,364,116 73</u>
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STATEMENT SHOWING THE ACTUAL STANDING OF FERRY DIVISION, STREET DEPARTMENT, WITH THE CITY OF BOSTON FEBRUARY 1, 1898.

Dr.

Amount paid previous to April 1, 1870	\$592,190 68
Amount paid from April 1, 1870, to February 1, 1898, as follows:	
Seven new ferry steamers	371,956 04
New buildings, piers and drops	406,218 35
Fuel	948,260 01
Repairs of all kinds	675,629 14
Salaries and wages	3,087,689 94
Tools and fixtures	13,284 76
Land from Lincoln's Wharf in 1887	5,562 52
Land from Battery Wharf in 1893	10,000 00
All other expenses	902,660 68
Transfers to other Divisions of Street Department	16 81
	\$7,013,468 93

Cr.

By amount paid the city for income	\$4,649,352 20
amount charged to ferry property for avenues that were laid out as streets, August, 1880, and which should be credited to this division, paving avenues	250,000 00 11,530 84
amount paid to Department of Public Buildings previous to January 1, 1881, and which should be credited to this division	60,277 56
estimated value of seven ferry steamers	\$176,885 00
less 6 per cent. for depreciation	10,613 10
estimated value of real estate and franchise as per last report	\$649,500 00
added for improvement during the year	26,400 00
amount paid for awning, North Ferry, East Boston	742 94
new ferry-landing, expenditure not yet charged off	160 10
electric light for boats, expenditure not yet charged off	5,862 88
<i>Carried forward,</i>	\$5,820,098 42

<i>Brought forward,</i>	\$5,820,098 42
By land from Lincoln's Wharf	5,562 52
land from Battery Wharf	10,000 00
estimated value of tools and fixtures	6,000 00
estimated value of fuel on hand	567 76
estimated value of supplies on hand	3,494 69
amount expended on Eastern-avenue Wharf,	1,499 46
cash with employés as capital	608 00
amount charged to new ferry steamer to date,	17,681 84
amount of transfers to other divisions	16 81
profit and loss in 27 years 10 months	1,147,939 43
	\$7,013,468 93

STATEMENT SHOWING THE DIFFERENCE OF TRAVEL ON THE
FERRIES FROM FEBRUARY 1, 1897, TO FEBRUARY 1, 1898.

	<i>North.</i>	<i>South.</i>
Foot-passengers, at 1 cent each	8,622 242	3,420 676
Foot-passengers by ticket	87,342	50,908
	8,709,584	3,471,584
Foot-passengers, free	59,799	6,430
One-horse teams and pleasure carriages, ...	224,702	202,259
Two-horse teams	83,232	125,265
Three-horse teams	2,261	4,237
Four-horse teams	5,549	8,028
Two-horse pleasure carriages and hacks, ...	5,768	2,051
Two-cent tolls (at gate) handcars, etc., ...	4,456	4,363
Four-cent tolls	126,388	185,165
Six-cent tolls	3,200	3,640
Seven-cent tolls	4	—
Eight-cent tolls	8,767	13,170
Ten-cent tolls	362	856
Thirteen-cent tolls	455	929
Fifteen-cent tolls	34	28
Twenty-cent tolls	—	2
Thirty-cent tolls	3	8
Free teams	4,251	2,297

**Total Travel on both Ferries from February 1, 1897, to
February 1, 1898.**

	From Feb. 1, 1893, to Feb. 1, 1894.	From Feb. 1, 1894, to Feb. 1, 1895.	From Feb. 1, 1895, to Feb. 1, 1896.	From Feb. 1, 1896, to Feb. 1, 1897.	From Feb. 1, 1897, to Feb. 1, 1898.
One-horse teams.....	665,967	690,427	676,294	733,478	738,514
Two-horse teams	202,323	204,667	248,291	219,306	240,434
Three-horse teams.....	7,573	6,242	9,095	9,290	7,716
Four-horse teams.....	16,641	14,503	16,939	14,902	14,961
Two-horse carriages and hacks	16,340	16,236	10,349	16,299	14,659
Two-cent tolls for hand- carts, etc.....	6,259	5,726	7,059	8,321	8,819
Drag-wheels, etc.....	88	57	101	76	75
Foot-passengers.....	10,988,027	11,281,321	11,929,790	12,034,300	12,466,272

TICKET STATEMENT.

Foot-passes outstanding February 1, 1897 . . .	193,700
Foot-passes sold during the year . . .	132,080
Foot-passes delivered on requisitions . . .	7,200
Received and destroyed during this year . . .	332,980
Outstanding February 1, 1898 " . . .	194,730

Team Tickets.

	1-Horse.	2-Horse.	3-Horse.	4-Horse. "
Outstanding February 1, 1897....	56,449	31,553	2,010	4,936
Sold during the year.....	369,648	208,720	6,696	13,540
Delivered on requisitions.....	1,792	1,232		
	427,889	241,505	8,706	18,476
Received and destroyed during the year	369,605	208,497	6,498	13,577
Outstanding February 1, 1898....	58,284	33,008	2,208	4,899

Pleasure Carriage Tickets.

	1-Horse.	2-Horse.
Outstanding February 1, 1897	16,219	2,778
Sold during the year	58,180	8,020
Delivered on requisitions	900	
	75,299	10,798
Received and destroyed during the year	57,356	7,819
Outstanding February 1, 1898	17,943	2,979



BOSTON STREET AT EDWARD EVERETT SQUARE TO BE WIDENED AND CONSTRUCTED AS A PART OF COLUMBIA ROAD.

APPENDIX C.

REPORT OF THE DEPUTY SUPERINTENDENT OF THE
PAVING DIVISION.

ROOM 44, CITY HALL, BOSTON, February 1, 1898.

MR. BENJ. W. WELLS, *Superintendent of Streets*:

DEAR SIR: I respectfully submit the annual report of the expenditures and income of the Paving Division of the Street Department for the financial year ending January 31, 1898, showing the nature of the work, the number and variety of permits issued, and the details of expenditures involved in paving, macadamizing, regulating and constructing various streets.

Respectfully yours,

JOHN L. KELLY,
Deputy Superintendent.

The following table shows the amount expended for maintenance of the Paving Division and from special appropriations derived from loans for the last seven (7) years, not including the cost of street-watering, to be found on another page:

	Maintenance.	Specials.	Totals.
1891 (13 months).....	\$872,936 40	\$1,014,324 26	\$1,887,260 66
1892.....	915,460 99	962,889 09	1,878,350 08
1893.....	745,681 52	707,801 49	1,453,483 01
1894.....	715,608 62	839,713 78	1,555,322 40
1895.....	683,899 42	823,011 70	1,506,911 12
1896.....	628,675 46	1,755,176 71	2,383,852 17
1897.....	690,187 34	1,413,142 79	2,103,330 13

FINANCIAL STATEMENT.

REGULAR APPROPRIATION.

Appropriation for 1897-98	\$660,000 00
Amount collected for repairs made by Paving Division for different companies, etc.	1,296 80
Amount transferred from surplus income	\$28,660 46
Amount transferred from Central office	206 70
Amount transferred from Ferry Division	16 76
Amount transferred from Street-cleaning Division	6 62
	28,890 54
	\$690,187 34
Amount of expenditures from February 1, 1897, to January 31, 1898	\$690,187 34

Objects of Expenditures from the Regular Appropriation, Classified by Districts, from Feb. 1, 1897, to Jan. 31, 1898.

DISTRICTS.	Repairs.	Snow.	Edgestone and Sidewalk Repairs.	Repairing Fences.	Repairing Plankwalks.	A. Miscellaneous.	B. In Excess of Special Appropriation.	C. New Work.	Totals.
1. South Boston.....	\$5,421 44	\$8,260 48	\$6,191 91	\$1,077 82	\$863 12	.....	1	.....	1\$19,855 25
2. East Boston.....	16,505 88	5,703 97	3,988 39	402 22	237 22	.....	\$5,633 87	.....	32,471 55
3. Charlestown.....	10,357 52	8,438 21	4,357 98	93 09	.....	.....	2	.....	222,912 54
4. Brighton.....	15,985 02	4,748 56	477 33	252 49	728 32	.....	6,657 15	.....	28,848 87
5. West Roxbury.....	35,644 96	5,762 09	3,030 67	860 78	1,821 53	.....	2,187 09	.....	49,307 12
6. Dorchester.....	51,909 56	7,071 98	6,730 97	681 23	4,015 40	.....	12,487 56	\$6,166 44	89,063 14
7. Roxbury.....	46,986 82	12,959 84	8,263 40	435 92	1,716 48	.....	9,510 75	.....	79,873 21
8. South End.....	19,513 99	23,894 44	5,757 71	74 28	1,916 35	.....	3,029 35	.....	54,186 12
9. Back Bay.....	27,100 52	13,359 01	3,775 74	754 72	948 43	.....	14,720 30	2,409 67	63,068 39
10. North End.....	13,458 87	26,025 62	5,561 62	194 94	109 87	.....	1,312 95	3,817 34	50,481 21
						\$200,119 94		.....	200,119 94
							\$55,539 02		
							1, 2 2,233 78		
Totals.....	\$242,884 58	\$116,224 20	\$48,135 72	\$4,827 49	\$12,356 72	\$200,119 94	\$53,245 24	\$12,393 45	\$690,187 34

¹ Less overcredit in South Boston district, \$1,959.52.² Less overcredit in Charlestown district, \$334.26.

(A.) See Schedule A for items. (B.) This schedule shows amount of money spent in excess of the special appropriation, and taken from the maintenance appropriation; for items, see Schedule B and special appropriations. (C.) This schedule shows streets where the repairs have exceeded \$2,000; for items, see Schedule C.

FINANCIAL STATEMENT.

SPECIAL APPROPRIATIONS, PAVING AND STREET IMPROVEMENTS.

Amounts of balances, 1896-97, less transfers	\$314,311 82
Amount of appropriations, 1896-97, revenues and transfers	*920,822 07
	\$1,235,133 89
Amount of expenditures	1,070,919 61
Balances unexpended	<u>\$164,214 28</u>

TOTAL EXPENDITURES.

Maintenance appropriation	\$690,187 34
Special appropriations	1,070,919 61
Laying-out and Construction of Highways	261,124 44
Blue Hill and other Avenues	81,098 74
	<u>\$2,103,330 13</u>

INCOME.

Statement showing the amount of bills deposited with the City Collector, from February 1, 1897, on account of the Paving Division :

Edgestone and sidewalk assessments	\$3,236 51
Permits	13,618 50
Miscellaneous	15 35
	<u>\$16,870 36</u>

The amount paid into the city treasury during the year on account of the Paving Division is as follows :

Sidewalk construction assessments (law of 1892),	\$11,526 59
Edgestone and sidewalk assessments (law of 1893)	3,540 64
Permits	13,618 50
Miscellaneous	15 35
	<u>\$28,701 08</u>

* Six thousand to be provided for on appropriation for Gold-street bridge.

SCHEDULE A.

Salaries of Paving Division office, February 1, 1897, to January 31, 1898	\$16,706 24
Salaries of Permit office, February 1, 1897, to January 31, 1898	8,147 88
Salaries of inspectors, February 1, 1897, to January 31, 1898	17,992 62
Salaries of engineers, February 1, 1897, to January 31, 1898	4,698 66
Advertising in and subscribing for daily papers	1,420 85
Printing and stationery	11,519 56
Holidays	18,838 11
Expenses of yards and stables, including repairs, etc., to carts and harnesses and stables	\$126,683 54
Less amount earned by Division teams	80,464 00
	46,219 54
Veterinary services	1,674 30
Tools, cost of keeping same in repair, etc.	19,779 63
Telephones	1,148 32
Street signs	4,506 84
Sundries	1,588 67
Edgestones and sidewalks, new	9,716 51
Artificial stone sidewalks	4,803 92
Building new fences	190 52
Building new plankwalks	110 13
Street cleaning	61,984 40
Damages	456 82
Watering streets	1,184 18
Crossing repairs	10,714 80
Crossings (new)	985 62
Man-hole and catch-basin repairs	217 78
Work done for Sewer Division	573 25
Work done for Water Department	25 43
Asphalt blocks sold to Edison Electric Illuminating Company	30 60
Stone sold to Massachusetts Broken Stone Company	874 34
Material sold to West End Street Railway Company	184 80
	\$246,294 32
Less credit for stone taken from crushers	\$39,496 18
Less amount earned by steam rollers	6,630 74
Less decrease in stock	47 46
	46,174 38
	\$200,119 94

SCHEDULE B.

The following schedule shows the expenditure from the maintenance appropriation of this division in excess of special appropriations :

Adams street, Ward 24	\$872 36
Albany street	38 65
Appleton street	1,329 00
Carleton street	65 75
Centre street, Dorchester	489 57
Centre street, Hogg's bridge to Day street	1,247 30
Centre street, Ward 23	230 68
Charles street	409 39
Commonwealth avenue	4,201 98
Dudley street, Brook avenue to Upham's corner	402 14
Franklin street	540 18
Lamartine street	500 67
McLellan street	425 97
Rand street	149 23
State street	11 40
Unity street	12 40
Washington street, Dover to Union Park street	343 67
Western avenue	1,914 99
South Union Station	151 70

Street Improvements, Ward 1 :

Bremen street	\$171 47
Glendon street	70 00
Homer street	68 20
Horace street	72 70
Lexington street	2,174 26
Prescott street	248 25
Princeton street	287 15
Saratoga street	125 50
	3,217 53

Street Improvements, Ward 2 :

Bremen street	\$256 21
Havre street	408 87
Liverpool street	406 68
London street	374 82
Meridian street	121 80
Porter street	847 96
	2,416 34

Street Improvements, Ward 6 :

Atlantic avenue	\$39 00
Bulfinch street	19 25
Congress street	196 37
Foster street	132 36
<i>Carried forward,</i>	\$386 98
	\$18,970 90

<i>Brought forward,</i>	\$386 98	\$18,970 90
Haverhill street	13 03	
Lafayette avenue	156 45	
Lime alley	15 60	
Mt. Vernon street	208 15	
North street	69 62	
North Margin street	36 85	
Somerset street	91 87	
Wiget street	14 71	
		993 26
Street Improvements, Ward 7 :		
Boylston street	\$9 00	
Dix street	62 56	
La Grange street	9 49	
Park street	168 20	
Winthrop square	47 32	
		296 57
Street Improvements, Ward 8 :		
Bowdoin street	\$87 93	
Derne street	77 41	
Eaton street	9 57	
North Grove street	56 28	
North Russell street	60 86	
Staniford street	47 30	
		339 35
Street Improvements, Ward 9 :		
Bradford street	\$72 92	
Cobb street	7 95	
Mayo street	18 35	
Paul street	11 58	
Pelham street	15 41	
Upton street	34 52	
Washington street, Dover to Union		
Park street	38 13	
Waterford street	11 15	
		210 01
Street Improvements, Ward 10 :		
Boylston street	\$407 33	
Bryant street	1,378 19	
Church street	72 17	
Cortes street	334 21	
Dundee street	12 00	
Falmouth street	3,131 01	
Isabella street	110 33	
Knox street	142 32	
Massachusetts avenue	87 63	
Norway street	153 32	
		5,828 51
<i>Carried forward,</i>		\$26,638 60

<i>Brought forward,</i>		\$26,638 60
Street Improvements, Ward 11 :		
Arlington street	\$559 91	
Beacon street	7,694 13	
Boylston street	20 00	
Mt. Vernon street	540 41	
Pinckney street	617 75	
		9,432 20
Street Improvements, Ward 12 :		
Concord square	\$162 26	
East Lenox street	35 59	
Greenwich Park	198 26	
Massachusetts avenue	29 25	
Newland street	48 02	
Reed street	108 67	
West Newton street	11 95	
		594 00
Street Improvements, Ward 16 :		
Boston street	\$15 25	
Brookford street	105 07	
Buttonwood street	129 00	
Cottage street	29 46	
Dacia street	95 69	
Dorchester avenue	75 24	
Ingleside street	99 00	
Judson street	312 00	
Magnolia street	38 51	
Mt. Vernon street	11 24	
Willow court	59 50	
Woodward Park street	37	
		970 33
Street Improvements, Ward 17 :		
Cottage street	\$104 00	
Howard avenue	1,342 13	
Hunnehan street	396 25	
Mall street	608 52	
Mt. Pleasant avenue	206 33	
Pontine street	9 06	
Shirley street	1,177 94	
Winslow street	1,041 80	
Zeigler street	426 06	
		5,312 09
Street Improvements, Ward 18 :		
Ball street	\$109 66	
Cunard street	144 03	
Ruggles street	73 19	
Sarsfield street	26 60	
Tremont street	25 20	
<i>Carried forward,</i>	\$378 68	\$42,947 22

<i>Brought forward,</i>	\$378 68	\$42,947 22
Walpole street	39 00	
Westminster street	194 12	
Williams street	577 12	
		1,188 92
Street Improvements, Ward 19 :		
Bromley street	\$31 50	
Centre street	12 50	
Conant street	3 76	
King street	6 25	
Minden street	16 50	
Walden street	10 00	
		80 51
Street Improvements, Ward 20 :		
Savin Hill avenue	\$180 14	
Talbot avenue	815 60	
		995 74
Street Improvements, Ward 21 :		
Bainbridge street		114 75
Street Improvements, Ward 22 :		
Arklow street	\$65 78	
Boylston street	729 69	
Bromley street	13 78	
Centre street	13 10	
Forbes street	211 03	
Heath street	97 51	
Minden street	15 00	
School street	49 34	
Washington street	222 72	
		1,417 95
Street Improvements, Ward 23 :		
Ashley street	\$15 00	
Burnett street	130 00	
Green street	143 00	
Keyes street	635 72	
Walk Hill street	278 32	
Williams street	253 70	
		1,455 74
Street Improvements, Ward 24 :		
Ashmont street	\$632 21	
Blue Hill avenue	147 07	
Butler street	172 87	
Centre street	160 25	
Dix street	152 62	
Euclid street	214 70	
Evans street	39 46	
Marsh street	46 76	
Medway street	21 58	
<i>Carried forward,</i>	\$1,587 52	\$48,200 83

<i>Brought forward,</i>	\$1,587 52	\$48,200 83
Milton avenue	83 93	
Morton street	58 10	
Norfolk street	115 00	
Richmond street	217 67	
Tenean street	5,029 43	
Washington street	246 54	
		7,338 19
		\$55,539 02
Less overcredits on the following streets :		
Street Improvements, Ward 3 :		
Lexington street	\$13 63	
Vine street	6 80	
		\$20 43
Street Improvements, Ward 4 :		
Baldwin street	\$90 56	
Main street	208 97	
		299 53
Street Improvements, Ward 5 :		
Adams street	\$2 42	
Devens street	11 88	
		14 30
Street Improvements, Ward 14 :		
Broadway	\$326 88	
Fifth street	202 58	
First street	670 58	
L street	225 97	
		1,426 01
Street Improvements, Ward 15 :		
Fifth street	\$86 01	
G street	90 56	
H street	200 06	
Thomas park	156 88	
		533 51
		2,293 78
		<u>\$53,245 24</u>

SCHEDULE C.

NEW WORK.

Beacon street, Charles to Park street, macadamized.

Labor	\$989 04
Teaming	670 00
Stone	1,508 35
Gravel	649 95
	<u>\$3,817 34</u>

Fairfield street, Boylston to Beacon street, macadamized.

Labor	.	.	.	.	.	.	.	.	\$168 90
Teaming	.	.	.	.	.	.	.	.	880 50
Gravel	.	.	.	.	.	.	.	.	249 36
Stone	.	.	.	.	.	.	.	.	1,014 87
Paving	.	.	.	.	.	.	.	.	44 04
Steam roller	.	.	.	.	.	.	.	.	52 00
									\$2,409 67

Geneva avenue, Wilder street to Blue Hill avenue, macadamized.

Labor	.	.	.	.	.	.	.	.	\$131 20
Teaming	.	.	.	.	.	.	.	.	570 00
Stone	.	.	.	.	.	.	.	.	1,445 69
Steam roller	.	.	.	.	.	.	.	.	78 00
									\$2,224 89

Glenway street, Bradshaw street to Blue Hill avenue, macadamized.

Labor	.	.	.	.	.	.	.	.	\$755 34
Teaming	.	.	.	.	.	.	.	.	583 71
Gravel	.	.	.	.	.	.	.	.	107 25
Stone	.	.	.	.	.	.	.	.	2,287 82
Steam roller	.	.	.	.	.	.	.	.	195 00
Paving	.	.	.	.	.	.	.	.	12 43
									\$3,941 55

*DETAIL OF EXPENDITURES MADE UNDER
SPECIAL APPROPRIATIONS.***Abbotsford street,** Ward 21, widening and construction, edgestone set, gutters paved, sidewalks and crossings laid.

Labor	.	.	.	.	.	.	.	.	\$1,146 70
Teaming	.	.	.	.	.	.	.	.	499 00
Gravel	.	.	.	.	.	.	.	.	105 50
Edgestone	.	.	.	.	.	.	.	.	667 88
Flagging	.	.	.	.	.	.	.	.	238 22
Artificial stone sidewalks	.	.	.	.	.	.	.	.	157 80
Paving	.	.	.	.	.	.	.	.	249 49
									\$3,064 59

Amount paid out of Abbotsford street,

Ward 21, ... \$570 00

Amount paid out of Street Improvements, Ward 21

2,494 59

\$3,064 59

Adams street, from junction of Neponset avenue to Gibson street, widening on southerly side from Park street to Neponset avenue, paved with large granite blocks, edgestone reset and set, crossings laid, sidewalks relaid.

Labor	\$2,330 77
Teaming	2,638 50
Gravel	1,001 00
Blocks	1,703 52
Flagging	230 60
Stone	388 01
Edgestone	110 08
Paving	1,015 36

\$9,417 84

Amount of appropriation for Adams

street, Ward 24, reconstruction . . \$7,500 00

Amount paid out of Paving Division . . 872 36

Amount paid out of Street Improve-
ments, Ward 24 1,045 48

\$9,417 84

Adelaide street, Ward 22, reconstruction, macadamized.

Labor	\$3,622 17
Teaming	2,519 00
Powder	183 48
Fuel	94 95
Sundries	41 90

\$6,461 50

Amount of appropriation for Adelaide

street \$4,000 00

Amount paid out of Street Improve-
ments, Ward 22 2,458 50

Amount paid out of Street Improve-
ments, Ward 23 3 00

\$6,461 50

Albany street, in front of Massachusetts Homœopathic Hospital, asphalted.

Labor	\$209 00
Teaming	244 50
Gravel	67 65
Sand	4 90
Bricks	192 27
Templets	24 67

Amount paid to Boston Asphalt Company:

Asphalting 6,140 08

Carried forward,

\$6,883 07

<i>Brought forward,</i>	\$6,883 07
Amount paid out of appropriation for Albany street	\$6,140 08
Amount paid out of Street Improve- ments, Ward 12	704 34
Amount paid out of Paving Division	38 65
	\$6,883 07

Appleton street, Dartmouth to Tremont street, macadam-
izing, gutters paved, edgestone reset, sidewalks relaid.

Labor	\$2,847 81
Teaming	3,637 50
Gravel	691 01
Sand	35 00
Stone	2,143 68
Steam roller	281 00
Blocks	1,030 17
Bricks	420 15
Masonry	540 50
Paving done by Jones & Meehan	3,002 18

\$14,629 00

Amount of special appropriation	\$13,300 00
Amount paid out of Paving Division	1,329 00

\$14,629 00

Boylston street, Berkeley to Clarendon street, asphalted,
edgestone reset, sidewalks relaid.

Labor	\$436 29
Teaming	223 50
Gravel	168 66
Sand	172 60
Edgestone	57 50
Bricks	560 00
Templets	43 36
Amount paid to J. B. O'Rourke, excavating	600 00
Amount paid to T. M. Gill, paving	1,234 69
Amount paid to Barber Asphalt Paving Company, asphalting	9,003 30

\$12,496 90

Amount of appropriation for Boylston street	\$12,496 90
---	-------------

Cabot street, Linden Park to Vernon street, asphalted.

Labor	\$1,067 97
Teaming	902 00
Gravel	127 00
Edgestone	271 64

Carried forward, \$2,368 61

<i>Brought forward,</i>	\$2,368 61
Bricks	105 00
Steam roller	65 00
Templets	29 90
Paving	259 02
Amount paid to Barber Asphalt Paving Company, asphalting	3,942 94
	\$6,770 47

Calumet street, widening and construction.

Filling	\$324 00
Teaming	16 00
Stone	26 65
Sand	33 00
	\$399 65

Amount paid out of appropriation for Calumet street	\$324 00
Amount paid out of Street Improve- ments, Ward 19	75 65
	\$399 65

Carleton street, Ward 10, construction (work unfinished).

Labor	\$354 96
Teaming	39 00
Gravel	26 75
	\$420 71

Amount paid out of Carleton street . .	\$354 96
Amount paid out of Paving Division . .	65 75
	\$420 71

Centre street, Dorchester, reconstruction, macadamized, gutters repaved, edgestone reset.

Labor	\$2,814 32
Teaming	2,725 00
Gravel	591 58
Stone	1,511 66
Steam roller	260 00
Edgestone	36 56
Lumber	41 95
Artificial stone sidewalks	82 14
Sundries	30 00
Amount paid to James Dolan, paving . .	321 55

Carried forward, \$8,414 76

<i>Brought forward,</i>		\$8,414 76
Amount of appropriation for Centre street	\$7,132 90	
Amount paid out of Street Improvements, Ward 24	792 29	
Amount paid out of Paving Division	489 57	
		<u>\$8,414 76</u>

Centre street, Roxbury, Hog bridge to Day street, reconstructed, macadamized, edgestone reset, gutters repaved, crossings and sidewalks laid.

Labor	\$4,025 10
Teaming	1,642 28
Gravel and sand	136 70
Stone	1,430 28
Steam roller	546 00
Bricks	205 01
Flagging	492 24
Blocks	154 54
Fuel	98 20
Amount paid to James Dolan, paving	930 28
	<u>\$9,660 63</u>

Amount of appropriation	\$5,000 00
Amount paid out of Paving Division	1,247 30
Amount paid out of Street Improvements, Ward 22	3,413 33
	<u>\$9,660 63</u>

Centre street, Ward 23, construction, Maple to Spring street, macadamized, gutters paved, edgestone set, sidewalks laid.

Labor	\$2,668 24
Teaming	1,983 03
Gravel and sand	649 50
Edgestone	121 39
Bricks	73 50
Blocks	114 50
Stone	4,462 07
Steam roller	429 00
Fuel	24 55
Amount paid to James Dolan, paving	331 92
	<u>\$10,857 70</u>

Amount of special appropriation	\$10,000 00
Amount paid out of Paving Division	230 68
Amount paid out of Street Improvements, Ward 23	627 02
	<u>\$10,857 70</u>

Charles street, Cambridge to Leverett street, paved with large granite blocks on a gravel base with pitch joints, edgestone reset, crossings and sidewalks relaid.

Labor	\$4,464 85
Teaming	3,751 00
Gravel	857 46
Sand	141 77
Edgestone	39 83
Flagging	572 50
Bricks	328 88
Blocks	9,293 16
Masonry	165 50
Amount paid to D. J. Kiley, paving	8,622 33

\$28,237 28

Amount of special appropriation . . \$19,935 39

Amount paid out of Paving Division . . 409 39

Amount paid out of Street Improve-
ments, Ward 8 7,892 50

\$28,237 28

Commonwealth avenue.

Labor	\$13,161 09
Teaming	3,933 50
Gravel	1,170 54
Loam	1,519 26
Edgestone	193 00
Blocks	1,352 56
Stone	6,074 31
Steam roller	897 00
Fuel	59 70
Hardware	4 00
Amount paid to M. Kiernan, excavating	931 00
Amount retained from Boston Asphalt Company for work done in 1896	182 08
Amount paid to Boston Contracting Company, under execution of court	1,627 19
Amount paid to H. Gore & Co., paving	129 19
Amount paid to Geo. H. Wentworth & Co.	618 57

\$31,852 99

Amount paid out of Commonwealth

avenue \$27,651 01

Amount paid out of Paving Division . . 4,201 98

\$31,852 99

Congress and L streets, repaired.

Labor	\$457 11
Teaming	45 00

Carried forward,

\$502 11

<i>Brought forward,</i>	\$502 11
Screenings	224 20
Gravel and sand	170 17
Blocks	31 60
Bricks	10 50
Amount paid to H. Gore & Co., paving	790 25
Work done by the Sewer Division	11 32
Work done by the Bridge Division	1,218 46
	\$2,958 61

Dudley street, Brook avenue to Upham's corner, paved with large granite blocks on a gravel base, edgestone reset, sidewalks relaid, crossings laid.

Labor	\$8,010 33
Teaming	8,978 00
Gravel	1,305 70
Sand	559 20
Blocks	12,685 86
Bricks	262 50
Cement	10 00
Edgestone	5 66
Stone	560 71
Steam roller	550 00
Flagging	1,533 88
Amount paid to Doherty & Connors, paving	1,508 33
Amount paid to T. M. Gill	2,740 26
	\$38,710 43

Amount paid out of Dudley street	\$33,804 75
Amount paid out of Paving Division	402 14
Amount paid out of Street Improvements, Ward 16	4,503 54
	\$38,710 43

Franklin street, Ward 25, Fern to North Harvard street, macadamized.

Labor	\$455 10
Teaming	128 50
Gravel	349 80
Steam roller	104 00
Stone	884 71
Amount paid to Geo. H. Wentworth & Co.	318 59
	\$2,240 70

Amount of special appropriation	\$1,700 52
Amount paid out of Paving Division	540 18
	\$2,240 70

Freeport street, Ward 24, retaining-wall.

Labor, engineering	\$93 75
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Gold street bridge (under construction).

Labor	\$430 07
Teaming	115 50
Filling	1,075 85
Land damages	25,601 96
	\$27,223 38
Amount of special appropriation	\$21,223 38
Amount to be provided for	6,000 00
	\$27,223 38

Lamartine street, Ward 22, paved with large granite blocks.

Labor	\$2,144 50
Teaming	2,998 54
Gravel	941 25
Stone	539 91
Blocks	2,454 43
Artificial stone sidewalks	36 48
Amount paid to Jones & Meehan, paving	1,385 56
	\$10,500 67
Amount of special appropriation	\$10,000 00
Amount paid out of Paving Division	500 67
	\$10,500 67

Lincoln place, Worcester to West Springfield street, asphalted and regulated.

Labor	\$417 31
Teaming	113 00
Flagging	5 37
Blocks	5 33
Gravel	5 00
Masonry	52 50
Templets	12 01
Amount paid to Barber Asphalt Paving Company asphaltting	889 48
	\$1,500 00
Amount of special appropriation	\$1,500 00

McLellan street, Old Road to White street (unfinished work from 1896).

Labor	\$2,192 58
Teaming	1,464 00
Stone	263 29
Paving	32 32
Sundries	12 50
<i>Carried forward,</i>	\$3,964 69

<i>Brought forward,</i>		\$3,964 69
Amount paid out of McLellan street	\$1,699 56	
Amount paid out of Paving Division	425 97	
Amount paid out of Street Improve- ments, Ward 20.	1,839 16	
		<u>\$3,964 69</u>

North Margin street, Thacher to Endicott street, asphalted,
edgestones reset, brick sidewalks relaid.

Labor	\$548 58
Teaming	264 00
Gravel and sand	36 85
Bricks	80 00
Edgestone	24 38
Masonry	49 00
Templets	17 52
Amount paid to P. H. Bradley & Co., paving	391 58
Amount paid to Boston Asphalt Company, asphalt- ing	1,412 23
	<u>\$2,824 14</u>

Amount paid out of North Margin street, ...	\$1,415 98
Amount paid out of Paving Division	36 85
Amount paid out of Street Improve- ments, Ward 6	1,371 31
	<u>\$2,824 14</u>

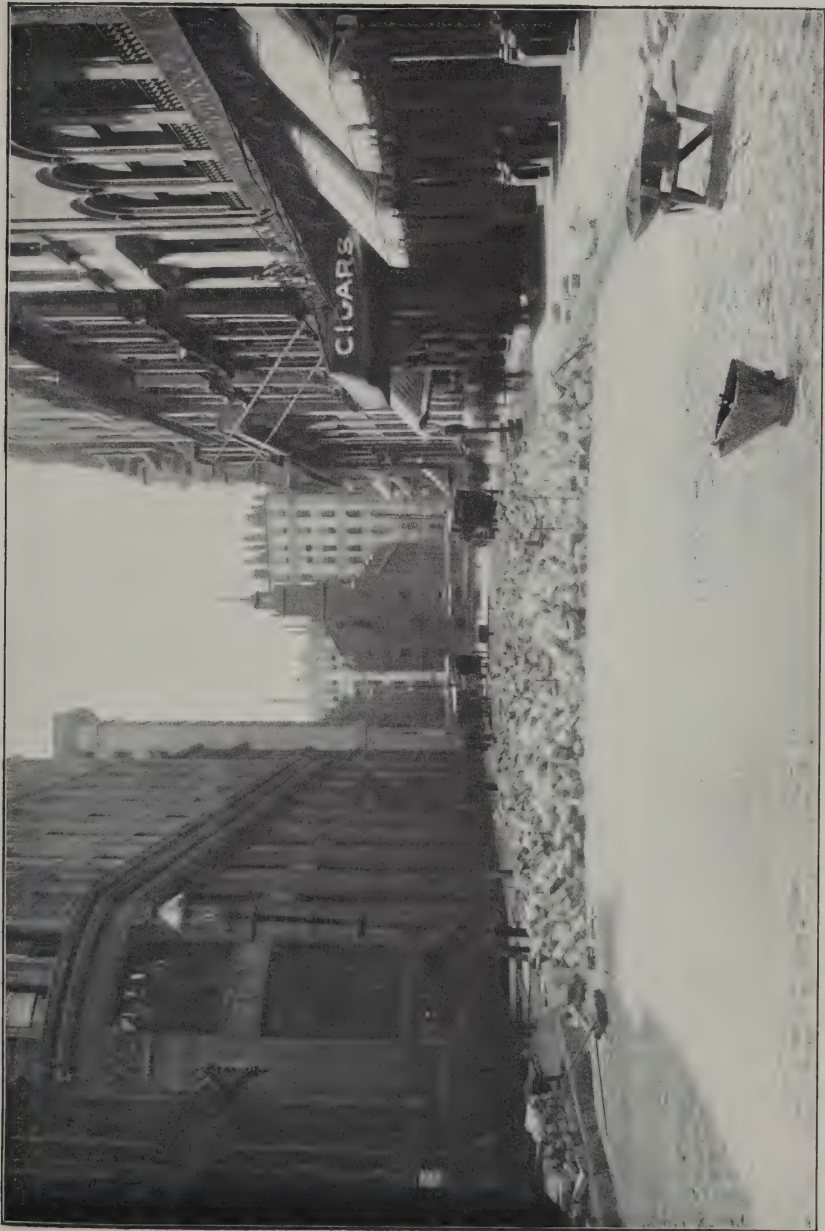
Quincy street, Ward 4 (now St. Martin st.).

Labor	\$875 90
Teaming	354 50
Gravel	224 40
Bricks	380 00
Stone	524 32
Edgestone	690 58
Loam	102 00
Lumber	12 70
Amount paid to P. Brennan & Co., paving	332 43
Cement	3 30
Work done by the Sewer Division	16 31
	<u>\$3,516 44</u>

Rand street, Roxbury, reconstruction, macadamized, gutters
paved.

Labor	\$1,684 30
Teaming	310 08
Gravel	63 75

Carried forward, \$2,058 13



STATE STREET UNDER CONSTRUCTION, SHOWING GRANITE BLOCK PAVING PITCH JOINTS ON A CONCRETE BASE.

<i>Brought forward,</i>	\$2,058 13
Stone	500 35
Blocks	371 85
	\$2,930 33
Amount paid out of Rand street	\$1,995 45
Amount paid out of Paving Division	149 23
Amount paid out of Street Improve- ments, Ward 16	785 65
	<u>\$2,930 33</u>

South Union Station, paving done on Cove, Federal and Summer streets.

Labor	\$2,007 74
Teaming	1,328 50
Edgestone	133 85
Gravel and sand	625 10
Masonry	31 50
Bricks	90 42
Amount paid to H. P. Nawn, excavating	1,371 45
Amount paid to T. M. Gill, paving	1,448 42
	\$7,036 98
Amount paid out of South Union Station, \$6,885 28	
Amount paid out of Paving Division	151 70
	<u>\$7,036 98</u>

State street, Washington to Commercial street, paved with large granite blocks on a concrete base with pitch joints, edgestones reset, flagging crossings and sidewalks relaid.

Labor	\$5,267 27
Teaming	4,215 00
Gravel	668 67
Sand	26 35
Edgestone	259 42
Flagging	1,876 89
Blocks	5,261 38
Cement	23 10
Lumber	44 99
Masonry	187 50
Templets	50 02
Artificial stone sidewalks	383 14
Sundries	37 62
Amount paid to Metropolitan Construction Com- pany, concrete base	4,288 30
Amount paid to H. Gore & Co., paving	5,248 71
Work done by the Sewer Division	125 70

Carried forward, \$27,964 06

<i>Brought forward,</i>		\$27,964 06
Amount of special appropriation . . .	\$18,000 00	
Amount paid out of Paving Division . . .	11 40	
Amount paid out of Street Improve- ments, Ward 6	9,952 66	
		<u>\$27,964 06</u>

Sydney street, Ward 20, Hartland street to Crescent avenue,
macadamized, gutters paved, sidewalks gravelled.

Labor	\$1,127 55
Teaming	798 50
Gravel and sand	762 98
Filling	1,166 10
Stone	1,313 58
Lumber	53 65
Amount paid to James Dolan, paving	338 18
	<u>\$5,560 54</u>

Tremont street, Lenox street to Roxbury crossing, paved
with large granite blocks, edgestones reset, flagging crossings
laid, brick sidewalks relaid.

Labor	\$8,174 60
Teaming	8,694 50
Blocks	9,785 24
Bricks	886 00
Gravel and sand	2,797 90
Flagging	777 61
Sundries	43 77
Amount paid to Jones & Meehan, paving	2,595 03
Amount paid to Barnes, Ruffin & Co., paving	1,441 46
	<u>\$35,196 11</u>

Amount of special appropriation . . .	\$17,024 45	
Amount paid out of Paving Division . . .	25 20	
Amount paid out of Street Improve- ments, Ward 18	12,127 90	
Amount paid out of Street Improve- ments, Ward 19	6,018 56	
		<u>\$35,196 11</u>

Unity street, Charter to Tileston street, asphalted, edgestone
reset, sidewalks relaid.

Labor	\$784 42
Teaming	359 50
Sand	12 40
Bricks	100 00
Masonry	17 50

Carried forward, \$1,273 82

<i>Brought forward,</i>	\$1,273 82
Templets	19 06
Paving	97 78
Amount paid to Barber Asphalt Paving Company, asphalting	1,424 43
	\$2,815 09
Amount paid out of Unity street	\$2,651 94
Amount paid out of Paving Division	12 40
Amount paid out of Street Improve- ments, Ward 6	150 75
	\$2,815 09

Washington street, Dover to Waltham street, paved with large granite blocks on a concrete base, with pitch joints, edgestones reset, brick sidewalks and crossings relaid.

Labor	\$2,660 60
Teaming	4,931 50
Gravel and sand	1,151 45
Edgestone	867 82
Blocks	6,793 07
Bricks	723 96
Cement	21 40
Templets	18 26
Flagging	113 45
Masonry	465 75
Artificial stone sidewalks	482 92
Hardware	4 00
Amount paid to H. P. Nawn, excavating	1,691 08
Amount paid to Jones & Meehan, paving	7,279 42
	\$27,204 68

Amount of special appropriation, ...	\$20,000 00
Amount paid out of Paving Division	381 80
Amount paid out of Street Improve- ments, Ward 9	6,822 88
	\$27,204 68

Washington street, Eliot to Dover street, paved with large granite blocks on a concrete base, with pitch joints, edgestones reset, crossings relaid.

Labor	\$11,151 25
Teaming	8,537 00
Gravel and sand	1,280 40
Bricks	1,673 46
Flagging	1,463 58
Edgestone	1,454 79
Blocks	9,473 74
Cement	11 00

Carried forward, \$35,045 22

<i>Brought forward,</i>	\$35,045 22
Templets	63 08
Masonry	712 00
Printing	24 00
Amount paid to William Higgins, paving . .	10,486 03
Amount paid to Jones & Meehan, paving . .	9,116 83
Amount paid to J. B. O'Rourke	44 25
Work done by the Sewer Division	138 97

\$55,630 38

Amount of special appropriation	\$35,000 00
Amount paid out of Street Improve- ments, Ward 7	4,737 86
Amount paid out of Street Improve- ments, Ward 9	15,892 52

\$55,630 38

**Western avenue, Market to North Harvard street, macad-
amized.**

Labor	\$4,422 92
Teaming	2,307 50
Stone	3,988 59
Steam roller	429 00
Gravel	995 34
Amount paid to James Grant, paving	278 93
Amount paid to D. J. Kiley, paving	659 34
Amount paid to Geo. H. Wentworth & Co., paving,	599 71
Work done by the Sewer Division	8 15

\$13,689 48

Amount of special appropriation	\$10,000 00
Amount paid out of Paving Division	1,914 99
Amount paid out of Street Improve- ments, Ward 25	1,774 49

\$13,689 48

Wharf and Buildings, East Boston, purchase of.

Amount paid to Francis Lally, for lot of land front- ing on Chelsea street	\$15,000 00
Amount of special appropriation	\$15,000 00

STREET IMPROVEMENTS, WARD 1.

Bennington street, repaired.

Labor	\$45 00
Teaming	24 00
	<u>\$69 00</u>

Border street, North Ferry to Condor street, repaved, edge-stone reset, sidewalks and crossings laid and relaid.

Labor	\$5,796 69
Teaming	1,364 50
Gravel and sand	3,143 00
Bricks	1,400 00
Flagging	336 45
Amount paid to Ward & Conlin, paving	7,698 53

\$19,739 17

Amount paid out of Street Improve-
ments, Ward 1 \$7,797 77

Amount paid out of Street Improve-
ments, Ward 2 11,941 40

\$19,739 17

Bremen street, edgestones reset, gutters repaved, sidewalks relaid.

Labor	\$190 72
Teaming	1,067 50
Gravel	1,568 00
Paving	116 21

\$2,942 43

Amount paid out of Street Improve-
ments, Ward 1 \$2,426 75

Amount paid out of Street Improve-
ments, Ward 2 88 00

Amount paid out of Paving Division 427 68

\$2,942 43

Brooks street, gravelled.

Gravel	\$35 00
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Byron street, gravelled.

Gravel	\$65 80
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Condor street, Meridian to Brooks street, edgestone reset, gutters repaved, brick sidewalks relaid.

Labor	\$398 65
Teaming	172 00
Gravel	253 40
Advertising	9 20
Amount paid to Ward & Conlin, paving	350 71

\$1,183 96

Amount paid out of Street Improve-
ments, Ward 1 \$1,138 96

Amount paid out of Street Improve-
ments, Ward 2 45 00

\$1,183 96

Glendon street, East Eagle to Condor street, edgestones reset, gutters repaved, sidewalks relaid.

Gravel	\$193 20
Teaming	164 50
Amount paid to Ward & Conlin, paving . . .	172 08
	\$529 78

Amount paid out of Street Improve- ments, Ward 1	\$459 78
Amount paid out of Paving Division . . .	70 00

\$529 78

Homer street, Moore to Wordsworth street, gutters paved, sidewalks rebuilt.

Gravel	\$127 40
Teaming	34 00
Amount paid to Ward & Conlin, paving . . .	68 20
	\$229 60

Amount paid out of Street Improve- ments, Ward 1	\$161 40
Amount paid out of Paving Division . . .	68 20

\$229 60

Horace street, Moore to Wordsworth street, gutters paved, sidewalks rebuilt.

Gravel	\$70 00
Teaming	51 00
Amount paid to Ward & Conlin, paving . . .	72 70
	\$193 70

Amount paid out of Street Improve- ments, Ward 1	\$121 00
Amount paid out of Paving Division . . .	72 70

\$193 70

Lexington street, Meridian to Prescott street, paved with old granite blocks, edgestone reset, brick sidewalks relaid.

Labor	\$3,572 90
Teaming	2,260 00
Gravel	350 00
Bricks	400 00
Amount paid to Ward & Conlin, paving . . .	2,015 45

\$8,598 35

Amount paid out of Street Improve- ments, Ward 1	\$5,124 80
Amount paid out of Street Improve- ments, Ward 2	1,299 29
Amount paid out of Paving Division . . .	2,174 26

\$8,598 35

Meridian street, West Eagle to Condor street, gutters repaved, sidewalks relaid.

Gravel and sand	\$191 80
Teaming	115 50
Amount paid to Ward & Conlin, paving . . .	218 06
	\$525 36

Amount paid out of Street Improve-
ments, Ward 1 \$185 50

Amount paid out of Street Improve-
ments, Ward 2 218 06

Amount paid out of Paving Division . . . 121 80

\$525 36

Moore street, Saratoga to Bennington street, edgestones reset, gutters repaved, sidewalks relaid.

Labor	\$619 00
Teaming	1,061 50
Gravel and sand	329 00
Stone	424 97
Bricks	50 00
Flagging	56 28
Advertising	10 20
Amount paid to Ward & Conlin, paving . . .	104 19

\$2,655 14

Prescott street, gutters repaved, sidewalks relaid.

Labor	\$157 25
Teaming	67 00
Gravel	21 00
Bricks	50 00
Amount paid to Ward & Conlin, paving . . .	91 00

\$386 25

Amount paid out of Street Improve-
ments, Ward 1 \$138 00

Amount paid out of Paving Division . . . 248 25

\$386 25

Princeton street, gutters paved, edgestone reset, sidewalks relaid.

Labor	\$176 35
Teaming	121 00
Gravel	25 20
Amount paid to Ward & Conlin, paving . . .	110 80

\$433 35

Amount paid out of Street Improve-
ments, Ward 1 \$146 20

Amount paid out of Paving Division . . . 287 15

\$433 35

White street, repaired.

Labor	\$65 25
Sand	70 00

 \$135 25

Work done by the Sewer Division	\$148 16
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STREET IMPROVEMENTS, WARD 2.

Chelsea street, repaired.

Teaming	\$119 00
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Everett street, Orleans to Jeffries street, gravelled, edgestone reset, gutters repaved, brick sidewalks and flagging crossings laid.

Labor	\$2,038 32
Teaming	1,278 50
Gravel and sand	2,585 80
Edgestone	20 10
Bricks	550 00
Blocks	26 94
Flagging	280 00
Amount paid to Ward & Conlin, paving	1,769 06

 \$8,548 72
Ferry avenue, plankwalk laid.

Lumber	\$105 96
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Havre street, resurfaced.

Labor	\$408 87
Teaming	11 00

 \$419 87
Amount paid out of Street Improve-
ments, Ward 2

\$11 00

Amount paid out of Paving Division

408 87

 \$419 87
Lamson street, repaired.

Gravel	\$56 00
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Liverpool street, edgestone set, sidewalks laid.

Labor	\$179 08
Teaming	84 00
Gravel	84 00
Paving	143 60

 \$490 68
Amount paid out of Street Improve-
ments, Ward 2

\$84 00

Amount paid out of Paving Division

406 68

 \$490 68

London street, Decatur to Maverick street, edgestone reset,
gutters repaved, sidewalks relaid.

Labor	\$222 21
Teaming	73 00
Gravel and sand	329 00
Bricks	155 00
Amount paid to Ward & Conlin, paving	486 26

\$1,265 47

Amount paid out of Street Improve-
ments, Ward 2, ...

\$890 65

Amount paid out of Paving Division

374 82

\$1,265 47

Maverick street, edgestones set, sidewalks laid.

Labor	\$249 02
Teaming	165 82
Gravel and sand	385 00
Paving	25 04

\$824 88

Morris street, repaired.

Gravel	\$140 00
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Porter street, Bennington to Bremen street, gravelled, edge-
stones set, brick sidewalks laid.

Labor	\$200 10
Teaming	107 00
Gravel and sand	287 00
Bricks	110 00
Amount paid to Ward & Conlin, paving	633 82

\$1,337 92

Amount paid out of Street Improve-
ments, Ward 2

\$489 96

Amount paid out of Paving Division

847 96

\$1,337 92

Work done by the Sewer Division

\$211 36

STREET IMPROVEMENTS, WARD 3:

Concord street, Bunker Hill street to Monument square,
macadamized, edgestones reset, gutters repaved, brick side-
walks relaid.

Labor	\$718 95
Teaming	312 50
Gravel	234 60

Carried forward,

\$1,266 05

<i>Brought forward,</i>	\$1,266 05
Bricks	100 00
Stone	548 09
Lumber	15 91
Cement	3 30
Amount paid to P. H. Brennan & Co., paving .	278 58
	\$2,211 93

Decatur street,	
Edgestone	\$4 90

High street, Winthrop to Salem street, macadamized.	
Labor	\$158 40
Teaming	142 50
Gravel	141 10
Stone	236 65
	\$678 65

Amount paid out of Street Improve- ments, Ward 3	\$502 75
Amount paid out of Street Improve- ments, Ward 5	175 90
	\$678 65

Hull street, repaired.	
Labor	\$275 10

Lexington street, Medford street to Monument square, mac- adamized, edgestone reset, gutters repaved, brick sidewalks relaid.	
Labor	\$1,835 46
Teaming	828 00
Gravel	552 50
Stone	1,073 61
Bricks	276 23
Edgestone	5 37
Amount paid to P. H. Brennan & Co., paving .	625 00
	\$5,196 17

Medford street, brick sidewalks laid.	
Bricks	\$71 25
Paving	27 85
	\$99 10

Amount paid out of Street Improve- ments, Ward 3	\$27 85
Amount paid out of Street Improve- ments, Ward 4	71 25
	\$99 10

Monument street, Monument square to Bunker Hill street, macadamized, edgestones reset, gutters repaved, brick sidewalks relaid.

Labor	\$680 15
Teaming	369 00
Gravel	188 70
Bricks	50 00
Stone	465 55
Lumber	15 91
Edgestone	5 60
Amount paid to P. H. Brennan & Co., paving .	318 58

\$2,093 49

Princeton street, brick sidewalks laid.

Paving	\$8 55
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Sprague street.

Teaming	\$1 50
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Trenton street, Bunker Hill to Bartlett street, macadamized, gutters paved, edgestones reset, brick sidewalks relaid.

Labor	\$614 00
Teaming	297 00
Gravel	234 60
Masonry	14 00
Bricks	80 00
Stone	405 65
Amount paid to P. H. Brennan & Co., paving .	265 61

\$1,910 86

Vine, Tufts, Moulton and Corey streets, macadamized and asphalted on all sides of St. Catharine's Church, edgestones reset, gutters repaved, sidewalks and crossings relaid.

Labor	\$1,255 36
Teaming	1,287 00
Gravel	537 20
Edgestone	135 75
Masonry	91 00
Stone	639 62
Bricks	278 00
Flagging	178 92
Cement	2 00
Templets	66 39
Amount paid to Barber Asphalt Paving Company, asphaltting .	6,060 24
Amount paid to P. H. Brennan & Co., paving .	2,424 29

\$12,955 77

Work done by the Sewer Division **\$19 48**

STREET IMPROVEMENTS, WARD 4.

Alford street, bridge to Everett line (work unfinished).

Labor	\$2,573 73
Teaming	263 00
Gravel	413 10
Stone	859 38
Edgestone	40 70
Paving	231 25
	\$4,381 16

Arlington avenue, resurfaced.

Labor	\$256 28
Teaming	102 00
Gravel	96 90
Paving	66 98
Water	9 00
	\$531 16

Auburn street, Main to Bunker Hill street, macadamized, edge-stones reset, gutters repaved, brick sidewalks relaid.

Labor	\$326 75
Teaming	511 50
Gravel	227 80
Stone	141 33
Bricks	75 00
Cement	1 00
Amount paid to Haley & O'Hara, paving	577 55
	\$1,860 93

Baldwin street, Main to Medford street, macadamized, edge-stones reset, gutters repaved, brick sidewalks relaid.

Labor	\$1,272 24
Teaming	1,163 00
Gravel	392 70
Stone	594 22
Bricks	264 82
Edgestone	6 06
Masonry	106 20
Amount paid to P. H. Brennan & Co., paving	557 53
	\$4,356 77

Beacham street (work unfinished).

Labor	\$762 30
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Dorrance street, Main street to Arlington avenue, macadamized, edgestones reset, gutters repaved, crossings laid, brick sidewalks relaid.

Labor	\$206 95
Teaming	139 00
Gravel	215 90
Bricks	90 00
Flagging	68 77
Lumber	31 65
Amount paid to Haley & O'Hara, paving . .	519 84

\$1,272 11

Gardner street, resurfaced.

Labor	\$62 10
Teaming	52 50
Gravel	25 50

\$140 10

Main street, Miller to Oak street, repaved with large granite blocks, edgestones reset, crossings and brick sidewalks relaid.

Labor	\$2,701 32
Teaming	2,222 00
Gravel	1,871 70
Blocks	9,737 78
Flagging	400 57
Bricks	410 62
Masonry	34 20
Lumber	31 55
Cement	20 40
Oil	9 27
Hardware	9 91
Amount paid to John Turner & Co., paving . .	5,107 72

\$22,557 04

Amount paid out of Street Improvements, Ward 4 \$9,585 67

Amount paid out of Street Improvements, Ward 5 12,971 37

\$22,557 04

Mead street, Main to Russell street, macadamized, edgestones reset, gutters repaved, brick sidewalks relaid.

Labor	\$121 25
Teaming	165 50
Gravel	181 90
Stone	407 70

Carried forward,

\$876 35

<i>Brought forward,</i>	\$876 35
Bricks	120 00
Amount paid to Haley & O'Hara, paving . . .	430 13
	\$1,426 48

Amount paid out of Street Improve- ments, Ward 4	\$1,018 78
Amount paid out of Street Improve- ments, Ward 5	407 70
	<u>\$1,426 48</u>

Short street, resurfaced.

Labor	\$32 00
Teaming	80 00
Gravel	27 20
Stone	38 90
	\$178 10

Amount paid out of Street Improve- ments, Ward 4	\$139 20
Amount paid out of Street Improve- ments, Ward 3	38 90
	<u>\$178 10</u>

Sullivan street, Main to Bunker Hill street, macadamized, edgestones reset, gutters repaved, flagging crossings laid, brick sidewalks relaid.

Labor	\$463 70
Teaming	235 00
Gravel	360 40
Bricks	180 00
Flagging	560 00
Amount paid to Haley & O'Hara, paving . . .	900 47
	\$2,699 57

Amount paid out of Street Improve- ments, Ward 4	\$2,419 57
Amount paid out of Street Improve- ments, Ward 3	280 00
	<u>\$2,699 57</u>

Walker street.

Teaming	\$80 00
Work done by Sewer Division	<u>\$23 01</u>

STREET IMPROVEMENTS, WARD 5.

Adams street, Mt. Vernon to Winthrop street, macadamized, edgestone reset, gutters repaved, brick sidewalks relaid.

Labor	\$1,160 04
Teaming	375 50
Gravel	283 90
Bricks	63 75
Stone	606 32
Masonry	16 51
Cement	1 00
Amount paid to P. H. Brennan & Co., paving .	385 66

\$2,892 68

Amount paid out of Street Improvements, Ward 5 \$2,715 68

Amount paid out of Street Improvements, Ward 3 177 00

\$2,892 68

Boyle street, Cordis to Pleasant street, edgestone set, gutters paved, sidewalks relaid, paved with old blocks.

Labor	\$232 30
Teaming	101 00
Edgestone	82 15
Paving	92 13

\$507 58

Charles River avenue, repaired.

Labor	\$98 60
Teaming	23 50
Flagging	63 50
Gravel	4 00
Blocks	13 47

\$203 07

Common street, Adams to Winthrop street, macadamized, edgestone reset, gutters repaved, sidewalks relaid.

Labor	\$745 95
Teaming	388 00
Gravel	222 70
Stone	512 15
Bricks	105 00
Cement	1 00
Amount paid to P. H. Brennan & Co., paving .	353 37

\$2,328 17

Devens street, Washington street to Rutherford avenue, paved with large granite blocks, edgestone reset, brick sidewalks relaid, flagging crossings laid.

Labor	\$640 17
Teaming	498 00
Gravel	227 80
Bricks	38 12
Blocks	1,047 07
Edgestone	105 00
Flagging	236 88
Masonry	19 53
Amount paid to Haley & O'Hara, paving	332 99
	\$3,145 56

Joiner street.

Gravel	\$25 50
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Park street, Warren to Common street, macadamized, edgestones reset, gutters repaved, brick sidewalks relaid.

Labor	\$292 63
Teaming	215 50
Gravel	192 10
Stone	445 34
Bricks	110 00
Amount paid to P. H. Brennan & Co., paving	197 99
	\$1,453 56

Putnam street, repaired.

Labor	\$34 50
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Rutherford avenue, work unfinished.

Labor	\$207 25
Teaming	90 50
Paving	48 00
Templets	20 26
	\$366 01

Amount paid out of Street Improvements,

Ward 5 \$275 51

Amount paid out of Street Improvements,

Ward 4 90 50

\$366 01

Warren avenue, City square to railroad crossing. Repaired with granite blocks, edgestones reset

Labor	\$460 73
Teaming	59 50
Gravel	187 00
Bricks	140 00
	\$847 23

Water street, Warren avenue to Joiner street, repaved with granite blocks.

Labor	\$130 60
Teaming	24 00
Water	8 00

\$162 60

Work done by the Sewer Division \$1 63

STREET IMPROVEMENTS, WARD 6.

Atlantic avenue, repaired.

Labor	\$633 42
Teaming	122 00

\$755 42

Amount paid out of Street Improve-
ments, Ward 6 \$716 42

Amount paid out of Paving Division,
Ward 6 39 00

\$755 42

Batterymarch street.

Amount retained from Barber Asphalt Paving Com-
pany, for work done in 1896, under contract \$64 33

Beacon street.

Gravel \$36 00

Blackstone street, at Fulton street.

Labor \$266 35

Bulfinch street, Allston to Cambridge street, paved with large granite blocks on a concrete base with pitch joints, edgestones reset, brick sidewalks relaid, crossings relaid.

Labor	\$423 31
Teaming	443 50
Gravel and sand	14 00
Bricks	45 25
Edgestone	50 05
Blocks	512 58
Masonry	28 00
Templets	22 32

Amount paid to Metropolitan Construction Com-
pany:

Excavating	\$115 50
Concrete base	415 63

531 13

Carried forward,

\$2,070 14

<i>Brought forward,</i>	\$2,070 14
Amount paid out of Street Improve- ments, Ward 6	\$2,026 74
Amount paid out of Street Improve- ments, Ward 8	24 15
Amount paid out of Paving Division	19 25
	\$2,070 14

Clark street, North to Commercial street, repaved with large granite blocks, edgestones reset, brick sidewalks relaid.

Labor	\$785 54
Teaming	249 50
Gravel and sand	111 25
Blocks	369 32
Bricks	35 00
	\$1,550 61

Commercial street, State to Central street, repaved.

Labor	\$236 80
Teaming	23 00
Blocks	22 25
	\$282 05

Congress street, State street to Exchange place, paved with large granite blocks on a concrete base with pitch joints, edgestone reset, brick sidewalks and crossings relaid.

Labor	\$919 18
Teaming	624 50
Gravel	83 21
Edgestone	64 01
Flagging	14 15
Bricks	80 00
Blocks	40 70
Masonry	28 00
Amount paid to Metropolitan Construction Com- pany, concrete base	1,022 00
Amount paid to H. Gore & Co., paving	962 65
	\$3,838 40

Amount paid out of Street Improve- ments, Ward 6	\$3,642 03
Amount paid out of Paving Division	196 37
	\$3,838 40

Cooper street, Endicott to Stillman street, asphalted.

Labor	\$107 25
Teaming	72 00
Amount paid to Barber Asphalt Paving Company, asphalting	1,196 79
	\$1,376 04

Foster street, Charter to Commercial street, macadamized,
gutters repaved, edgestones reset, sidewalks relaid.

Labor	\$337 65
Teaming	162 50
Gravel and sand	36 25
Bricks	89 90
Edgestone	56 21
Masonry	14 00
Amount paid to P. H. Bradley & Co., paving	116 73

\$813 24

Amount paid out of Street Improve-
ments, Ward 6

\$680 88

Amount paid out of Paving Division

132 36

\$813 24

Hanover street.

Amount retained from Boston Asphalt Company
for work done in 1896, under contract

\$138 51

Harris street, concrete sidewalks.

Labor	\$1 50
Amount paid to Simpson Bros. Company, con- creting	216 26

\$217 76

Lafayette avenue, Prince to Endicott street, repaired.

Labor	\$152 26
Teaming	153 00
Gravel and sand	22 85
Bricks	133 60
Paving	79 06

\$540 77

Amount paid out of Street Improve-
ments, Ward 6

\$384 32

Amount paid out of Paving Division

156 45

\$540 77

Lime alley, Charter to Commercial street, repaired.

Labor	\$276 65
Teaming	44 00
Gravel and sand	15 60
Paving	54 93

\$391 18

Amount paid out of Street Improve-
ments, Ward 6

\$375 58

Amount paid out of Paving Division

15 60

\$391 18

North street, Merchant's row to Union street, repaved with large granite blocks on a concrete base with pitch joints, edge-stones reset, brick sidewalks relaid.

Labor	\$461 14
Teaming	372 00
Gravel	69 62
Blocks	345 00
Bricks	70 00
Edgestone	29 03
Masonry	10 50
Paving	26 75
Amount paid to Metropolitan Construction Com- pany, concrete base	584 94
	\$1,968 98

Amount paid out of Street Improve- ments, Ward 6	\$1,899 36
Amount paid out of Paving Division	69 62

\$1,968 98

Somerset street, repaired.

Labor	\$224 20
Stone	91 87
	\$316 07

Amount paid out of Street Improve- ments, Ward 6	\$224 20
Amount paid out of Paving Division	91 87

\$316 07

Subway repairs.

Labor	\$98 80
Teaming	81 00
	\$179 80

Water street.

Amount retained from Barber Asphalt Paving Company, for work done in 1896, under contract	\$98 67
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Wiget street, North Margin to Salem street, asphalted, edge-stone reset, brick sidewalks relaid.

Labor	\$640 95
Teaming	227 00
Gravel	14 71
Edgestone	12 35
Bricks	50 00
Masonry	34 00
Templets	17 76

Carried forward,

\$996 77

<i>Brought forward,</i>	\$996 77
Amount paid to Barber Asphalt Paving Company, asphalting	674 88
	\$1,671 65
Amount paid out of Street Improve- ments, Ward 6	\$1,656 94
Amount paid out of Paving Division	14 71
	<u>\$1,671 65</u>

STREET IMPROVEMENTS, WARD 7.

Atlantic avenue, repaired.

Labor	\$342 45
Teaming	9 00
	<u>\$351 45</u>

Avery street, asphalted.

Labor	\$112 31
Edgestone	105 89
Artificial stone sidewalks	104 46
Amount paid to Boston Asphalt Company, asphalt- ing	981 52
	<u>\$1,304 18</u>

**Boylston street, Washington street to Park square, edgestone
reset, crossings relaid, roadway repaired.**

Labor	\$72 75
Teaming	382 00
Gravel	25 20
Amount paid to T. M. Gill, paving	383 25
	\$863 20

Amount paid out of Street Improve- ments, Ward 7	\$854 20
Amount paid out of Paving Division	9 00

\$863 20**Chauncey street (work done in 1896).**

Labor	\$5 00
Paving	56 00
	<u>\$61 00</u>

Congress street, Atlantic avenue to the bridge, repaved.

Labor	\$405 20
Teaming	401 00
Gravel	38 36

Carried forward, \$844 56

<i>Brought forward,</i>	\$844 56
Blocks	1,264 56
Edgestone	27 19
Sundries	4 29
Amount paid to John Turner & Co., paving . .	140 59
	\$2,281 19

Corning street.

Amount retained from Barber Asphalt Paving Company for work done in 1896, under contract . .	\$68 08
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Dix place, from Washington street, repaved.

Labor	\$383 95
Teaming	395 00
Gravel	89 03
Bricks	14 70
Masonry	91 00
Amount paid to J. B. O'Rourke, paving . . .	215 41
	\$1,189 09

Amount paid out of Street Improvements, Ward 7	\$1,126 53
Amount paid out of Paving Division	62 56

\$1,189 09

Exeter place, asphalted.

Labor	\$28 20
Amount paid to Boston Asphalt Paving Company, asphaltting	1,010 32
	\$1,038 52

La Grange street, Tremont street to Police Station No. 4, asphalted.

Labor	\$279 84
Teaming	66 00
Gravel	9 49
Masonry	21 00
Amount paid to Barber Asphalt Paving Company, asphaltting	1,062 48
	\$1,438 81

Amount paid out of Street Improvements, Ward 7	\$1,429 32
Amount paid out of Paving Division	9 49

\$1,438 81

Mason street, West street to engine-house, repaved.

Labor	\$108 85
Teaming	167 50

Carried forward, \$276 35

<i>Brought forward,</i>	\$276 35
Gravel	36 00
Amount paid to T. M. Gill, paving	295 50
	\$607 85

Ohio street.

Amount retained from Boston Asphalt Paving Company, for work done in 1896, under contract	\$39 56
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Park street, repaired.

Labor	\$257 12
Teaming	309 00
Gravel	84 56
Stone	83 64
	\$734 32

Amount paid out of Street Improvements, Ward 7	\$566 12
Amount paid out of Paving Division	168 20

\$734 32

Pine street.

Amount retained from Barber Asphalt Paving Company, for work done in 1896, under contract	\$85 13
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Wendell street, Broad to Batterymarch street, repaved.

Labor	\$822 64
Teaming	93 00
Gravel	77 00
Edgestone	12 40
Bricks	40 00
Crossing blocks	37 50
	\$1,082 54

Winthrop square, paved with large granite blocks on a concrete base, with pitch joints, edgestone reset, crossings and sidewalks relaid.

Labor	\$1,305 99
Teaming	1,560 00
Gravel	266 52
Blocks	2,785 97
Edgestone	14 38
Masonry	3 50
Templets	31 76
Lumber	30 05
Amount paid to Metropolitan Construction Company, concrete base	2,916 32

Carried forward, \$8,914 49

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<i>Brought forward,</i>	\$8,914 49
Amount paid to H. Gore & Co., paving	2,560 72
	\$11,475 21
Amount paid out of Street Improve- ments, Ward 7	\$11,427 89
Amount paid out of Paving Division,	47 32
	<u>\$11,475 21</u>

STREET IMPROVEMENTS, WARD 8.

Bowdoin street, repaired.

Labor	\$640 87
Teaming	15 00
Gravel	30 00
Stone	42 93
	\$728 80

Amount paid out of Street Improve- ments, Ward 8	\$640 87
Amount paid out of Paving Division	87 93
	<u>\$728 80</u>

Chambers street, Barton to Brighton street, repaved.

Labor	\$251 07
Teaming	48 00
Gravel	27 40
Bricks	15 00
Paving	131 74
	<u>\$473 21</u>

Derne street, at Mt. Vernon street, repaved.

Labor	\$71 00
Teaming	55 50
Stone	21 91
	\$148 41

Amount paid out of Street Improve- ments, Ward 8	\$71 00
Amount paid out of Paving Division	77 41
	<u>\$148 41</u>

Eaton street, work unfinished.

Labor	629 52
Flagging	3 27
Blocks	583 45
Sand	6 30
	\$1,222 54

Amount paid out of Street Improve- ments, Ward 8	\$1,212 97
Amount paid out of Paving Division	9 57
	<u>\$1,222 54</u>

Fruit street, North Grove to Blossom street, repaved with granite blocks, edgestone reset, brick sidewalks relaid.

Labor	\$1,016 81
Teaming	509 00
Gravel and sand	123 01
Flagging	123 65
Bricks	52 50
Masonry	17 50
Amount paid to D. J. Kiley, paving	361 84

\$2,204 31

Haverhill street, Travers to Causeway street, repaved.

Labor	\$501 14
Teaming	679 50
Gravel	13 03
Amount paid to D. J. Kiley, paving	296 87

\$1,490 54

Amount paid out of Street Improvements, Ward 8 \$1,441 51

Amount paid out of Street Improvements, Ward 6 36 00

Amount paid out of Paving Division 13 03

\$1,490 54

Joy street.

Teaming	\$93 00
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Lowell street.

Teaming	\$27 00
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Mt. Vernon street, Charles to Brimmer street, and in front of State House extension, repaired.

Labor	\$510 42
Teaming	460 00
Gravel	65 87
Stone	4 45
Blocks	29 62
Bricks	4 20

\$1,074 56

Amount paid out of Street Improvements, Ward 8 \$73 00

Amount paid out of Street Improvements, Ward 11 253 00

Amount paid out of Paving Division 748 56

\$1,074 56

North Grove street, Fruit to Cambridge street, paved with large granite blocks, edgestone reset, crossings laid, sidewalks relaid.

Labor	\$1,148 92
Teaming	1,241 00
Gravel	349 02
Edgestone	155 12
Flagging	169 84
Bricks	90 00
Masonry	17 50
Amount paid to D. J. Kiley, paving	600 94
	\$3,772 34

Amount paid out of Street Improve- ments, Ward 8	\$3,716 06
Amount paid out of Paving Division	56 28
	\$3,772 34

North Russell street, Parkman to Eaton street, repaired.

Labor	\$285 12
Teaming	60 00
Gravel	28 65
Bricks	16 80
Flagging	15 41
	\$405 98

Amount paid out of Street Improve- ments, Ward 8	\$345 12
Amount paid out of Paving Division	60 86
	\$405 98

Staniford street, Cambridge to Merrimac street, repaved with large granite blocks, edgestone reset, brick sidewalks and crossings relaid.

Labor	\$1,370 54
Teaming	423 00
Gravel	275 00
Blocks	141 44
Bricks	218 90
Flagging	110 36
Masonry	52 50
Amount paid to D. J. Kiley, paving	770 84
	\$3,362 58

Amount paid out of Street Improve- ments, Ward 8	\$3,315 28
Amount paid out of Paving Division	47 30
	\$3,362 58

STREET IMPROVEMENTS, WARD 9.

Acton street, asphalted.

Labor	\$2 50
Amount paid to Boston Asphalt Company, asphalting	980 10
	\$982 60

Albion street.

Labor	\$7 75

Bradford street, asphaltting.

Labor	\$1,024 74
Teaming	485 50
Flagging	30 80
Blocks	2 96
Bricks	48 08
Gravel	12 55
Templets	14 11
Masonry	169 50
Amount paid to Jones & Meehan, asphaltting	3,486 40
	\$5,274 64

Amount paid out of Street Improvements, Ward 9	\$5,201 72
Amount paid out of Paving Division	72 92

\$5,274 64**Canton street.**

Paving	\$17 93

Cobb street, asphalted.

Labor	\$726 52
Teaming	346 00
Cement	4 40
Templets	28 95
Masonry	84 00
Gravel and sand	7 95
Bricks	43 20
Edgestone	5 02
Amount paid to Boston Asphalt Company, asphalting	2,838 03

\$4,084 07

Amount paid out of Street Improvements, Ward 9	\$4,076 12
Amount paid out of Paving Division	7 95

\$4,084 07**Dedham street.**

Paving	\$24 24

Hamburg street.

Amount retained from Boston Asphalt Company, for work done in 1896, under contract . . .	<u>\$87 96</u>
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Laconia street.

Amount retained from Barber Asphalt Paving Company for work done in 1896, under con- tract	<u>\$103 01</u>
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Mayo street, asphalted.

Labor	\$292 18
Teaming	166 50
Gravel and sand	18 35
Bricks	53 10
Cement	3 20
Masonry	185 50
Amount paid to Boston Asphalt Company, asphalt- ing	1,161 09

\$1,879 92

Amount paid out of street Improve- ments, Ward 9	\$1,861 57
Amount paid out of Paving Division	18 35

\$1,879 92

Meander street.

Paving	\$14 65
Amount retained from Boston Asphalt Company for work done in 1896, under contract . . .	62 58
	<u>\$77 23</u>

Mystic street.

Paving	\$17 31
Amount retained from Boston Asphalt Company for work done in 1896, under contract . . .	123 53
	<u>\$140 84</u>

Norwich street.

Amount retained from Boston Asphalt Company for work done in 1896, under contract . . .	<u>\$50 91</u>
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Paul street, asphalted.

Labor	\$97 62
Gravel and sand	14 32
Bricks	100 00
Edgestone	26 72
Masonry	131 00
Templets	24 13
Printing	10 50

Carried forward,

\$404 29

<i>Brought forward,</i>	\$404 29
Amount paid to Jones & Meehan, asphaltting .	2,151 65
	\$2,555 94

Amount paid out of Street Improve- ments, Ward 9	\$2,544 36
Amount paid out of Paving Division .	11 58
	\$2,555 94

Pelham street, asphalted.

Labor	\$138 89
Teaming	40 50
Gravel	15 41
Flagging	48 04
Bricks	97 20
Edgestone	95 19
Cement	10 50
Templets	23 00
Masonry	129 50
Amount paid to Jones & Meehan, asphaltting .	2,689 65
	\$3,287 88

Amount paid out of Street Improve- ments, Ward 9	\$3,272 47
Amount paid out of Paving Division .	15 41
	\$3,287 88

Taylor street.

Amount retained from Boston Asphalt Company for work done in 1896, under contract . . .	\$25 72
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**Upton street, Tremont street to Shawmut avenue macadamized,
edgestone reset, gutters repaved and sidewalks relaid.**

Labor	\$529 99
Teaming	24 00
Sand	10 52
Blocks	538 35
	\$1,102 86

Amount paid out of Street Improve- ments, Ward 9	\$1,068 34
Amount paid out of Paving Division .	34 52
	\$1,102 86

**Union Park street, Albany street to Harrison avenue, macadam-
ized, edgestone reset, gutters repaved, brick sidewalks relaid.**

Labor	\$2,460 81
Teaming	1,651 50
Gravel and sand	489 90

<i>Carried forward,</i>	\$4,602 21
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<i>Brought forward,</i>	\$4,602 21
Stone	1,795 15
Steam roller	221 00
Blocks	725 82
Edgestone	47 19
Bricks	15 50
Flagging	160 08
Masonry	276 50
Fuel	25 38
Paving	14 00

\$7,882 83

Waterford street, asphalted.

Labor	\$224 74
Teaming	209 50
Gravel and sand	11 15
Bricks	42 30
Masonry	148 50
Edgestone	287 74
Amount paid to Jones & Meehan, asphaltting	1,515 70

\$2,439 63

Amount paid out of Street Improve-
ments, Ward 9 \$2,428 48
Amount paid out of Paving Division, 11 15

\$2,439 63

STREET IMPROVEMENTS, WARD 10.

Boylston street, Tremont street to Park square, and from
Exeter street to the bridge (unfinished work from 1896),
repaired.

Labor	\$21 50
Teaming	255 00
Gravel	196 46
Stone	428 95
Paving	228 20
Lumber	22 05

\$1,152 16

Amount paid out of Street Improve-
ments, Ward 10 \$744 83
Amount paid out of Paving Division, 407 33

\$1,152 16

Bryant street, Huntington avenue to Parker street, macad-
amized.

Labor	\$701 40
Teaming	20 00

Carried forward, \$721 40

<i>Brought forward,</i>	\$721 40
Filling	260 00
Stone	561 73
Steam roller	117 00

\$1,660 13

Amount paid out of Street Improve- ments, Ward 10	\$281 94
Amount paid out of Paving Division . .	1,378 19

\$1,660 13

Church street, Melrose to Tremont street, repaved with large blocks, edgestone reset, brick sidewalks relaid.

Labor	\$275 50
Teaming	421 00
Gravel and sand	264 24
Bricks	106 12
Blocks	619 62
Flagging	117 43
Masonry	220 50
Amount paid to J. B. O'Rourke, paving . .	769 31

\$2,793 72

Amount paid out of Street Improve- ments, Ward 10	\$2,721 55
Amount paid out of Paving Division . .	72 17

\$2,793 72

Cortes street, Berkeley to Ferdinand street, macadamized, edgestone reset, gutters repaved and brick sidewalks relaid.

Labor	\$28 00
Teaming	569 00
Gravel	438 66
Stone	401 04
Bricks	31 50
Amount paid to J. B. O'Rourke, paving . .	672 89

\$2,141 09

Amount paid out of Street Improve- ments, Ward 10	\$1,806 88
Amount paid out of Paving Division . .	334 21

\$2,141 09

Dartmouth street.

Teaming	\$33 00
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Dundee street, macadamized, gutters paved, edgestone reset, brick sidewalks relaid.

Labor	\$1,169 60
Teaming	1,264 50

Carried forward, \$2,434 10

<i>Brought forward,</i>	\$2,434 10
Gravel	231 63
Bricks	303 50
Stone	783 67
Artificial stone sidewalk	64 74
Amount paid to J. B. O'Rourke, paving	648 41
	\$4,466 05

Amount paid out of Street Improve- ments, Ward 10	\$4,454 05
Amount paid out of Paving Division	12 00
	\$4,466 05

Falmouth street, Massachusetts avenue to West Newton street, macadamized, edgestone reset, gutters repaved, brick sidewalks relaid.

Labor	\$1,409 51
Teaming	2,720 00
Gravel and sand	1,447 80
Stone	2,156 88
Steam roller	202 50
Amount paid to J. B. O'Rourke, paving	259 05
	\$8,195 74

Amount paid out of Street Improve- ments, Ward 10	\$5,064 73
Amount paid out of Paving Division	3,131 01
	\$8,195 74

Fayette street.

Labor	<u>\$10 75</u>
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Ferdinand street, Fayette to Melrose street, repaved with granite blocks.

Teaming	\$226 00
Gravel	151 54
Amount paid to J. B. O'Rourke, paving	346 15
	\$723 69

Isabella street, Ferdinand street to Columbus avenue, macadamized, edgestone reset, gutters repaved, brick sidewalks relaid.

Labor	\$110 60
Teaming	155 00
Gravel	221 35
Stone	305 98
Steam roller	52 00

Carried forward, \$844 93

<i>Brought forward,</i>	\$844 93
Cement	6 00
Amount paid to J. B. O'Rourke, paving	621 39

\$1,472 32

Amount paid out of Street Improve- ments, Ward 10	\$1,361 99
Amount paid out of Paving Division	110 33

\$1,472 32

Knox street, paved with old blocks taken from Church street.

Labor	\$138 20
Teaming	48 00
Gravel	21 00
Sand	3 32
Masonry	70 00

\$280 52

Amount paid out of Street Improve- ments, Ward 10	\$138 20
Amount paid out of Paving Division	142 32

\$280 52

Massachusetts avenue, Tremont street to railroad bridge,
macadamized, edgestone reset, gutters repaved, brick side-
walks relaid.

Labor	\$2,232 33
Teaming	1,079 50
Gravel and sand	295 43
Stone	1,092 88
Steam roller	104 00
Bricks	26 25
Sundries	8 09
Amount paid to T. M. Gill, paving	1,287 25

\$6,125 73

Amount paid out of Street Improve- ments, Ward 10	\$6,038 10
Amount paid out of Paving Division	87 63

\$6,125 73

Norway street, near corner Falmouth street, resurfaced, edgè-
stone reset, gutters repaved, and brick sidewalks relaid.

Labor	\$228 00
Teaming	15 00
Stone	119 63
Gravel	9 59

Carried forward,

\$372 22

<i>Brought forward,</i>	\$372 22
Artificial stone sidewalks	61 98
Paving	168 74

 \$602 94

Amount paid out of Street Improve- ments, Ward 10	\$449 62
Amount paid out of Paving Division	153 32

 \$602 94
St. Botolph street, unfinished from 1896.

Labor	\$28 00
Teaming	26 00
Gravel	19 18
Stone	1,788 91
Paving	6 00

 \$1,868 09
Yarmouth street, unfinished from 1896.

Labor	\$192 95
Teaming	283 00
Gravel	13 70
Sand	28 05
Bricks	5 00
Masonry	35 00

 \$557 70

STREET IMPROVEMENTS, WARD 11.

Arlington street, Boylston to Marlborough street, macadamized.

Labor	\$173 00
Stone	1,573 65
Steam roller	143 00
Gravel	77 56

 \$1,967 21

Amount paid out of Street Improve- ments, Ward 11	\$1,407 30
Amount paid out of Paving Division	559 91

 \$1,967 21
Audubon road, edgestone set.

Circular edgestone	\$243 32
Paving	83 81

 \$327 13

Beacon street, Commonwealth avenue to St. Mary's street,
macadamized, edgestone reset, gutters repaved, brick side-
walks and crossings relaid.

Labor	\$5,888 45
Teaming	7,669 50
Gravel and sand	2,110 86
Stone	10,808 36
Steam roller	832 00
Bricks	20 00
Blocks	150 42
Flagging	168 12
Cement	6 60
Amount paid to William Higgins, paving	1,827 46
	\$29,481 77

Amount paid out of Street Improve-
ments, Ward 11 \$21,787 64
Amount paid out of Paving Department, 7,694 13

\$29,481 77

Berkeley street.

Bricks	\$34 00
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Boylston street, unfinished from 1896.

Labor	\$130 95
Teaming	772 30
Filling	370 40
Steam roller	13 00
Paving	58 20

\$1,344 85

Amount paid out of Street Improve-
ments, Ward 11 \$1,324 85
Amount paid out of Paving Division . 20 00

\$1,344 85

Exeter street, unfinished from 1896.

Labor	\$39 00
Teaming	80 00
Filling	237 60
Paving	30 84
Lumber	5 79

\$393 23

Massachusetts avenue, Huntington avenue to railroad bridge,
resurfaced.

Labor	\$94 75
Gravel	181 57
Loam and sods	360 60

\$636 92

Newbury street.

Teaming	\$448 50
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Pinckney street, resurfaced.

Labor	\$624 05
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Teaming	105 50
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	\$729 55
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Amount paid out of Street Improve-
ments, Ward 11

\$111 80

Amount paid out of Paving Division	617 75
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\$729 55

STREET IMPROVEMENTS, WARD 12.

Camden street, Washington to Northfield street, macadamized, edgestone reset, gutters repaved, brick sidewalks relaid.

Labor	\$1,665 91
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Teaming	415 00
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Gravel and sand	115 70
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Stone	330 02
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Bricks	74 70
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Blocks	222 00
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Edgestone	6 70
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Masonry	84 00
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Amount paid to Jones & Meehan, paving	315 05
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\$3,229 08

Concord square, macadamized, edgestone reset, gutters repaved, brick sidewalks relaid.

Labor	\$387 04
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Teaming	767 00
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Gravel and sand	186 70
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Stone	747 67
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Steam roller	186 50
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Bricks	92 70
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Masonry	161 00
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Amount paid to J. B. O'Rourke, paving	773 99
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\$3,302 60

Amount paid out of Street Improve-
ments, Ward 12

\$3,140 34

Amount paid out of Paving Division	162 26
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\$3,302 60

East Brookline street (unfinished from 1896).

Paving	\$161 65
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East Lenox street, Washington to Fellows street, macadamized, edgestone set, brick sidewalks and crossings laid.

Labor	\$1,835 41
Teaming	1,185 17
Gravel and sand	148 02
Stone	1,095 32
Bricks	44 10
Cement	4 25
Flagging	97 55
Masonry	266 00

\$4,675 82

Amount paid out of Street Improvements, Ward 12 \$4,518 63

Amount paid out of Street Improvements, Ward 17 121 60

Amount paid out of Paving Division 35 59

\$4,675 82

Fellows street.

Labor	\$92 00
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Greenwich Park, macadamized.

Labor	\$621 55
Teaming	544 75
Gravel and sand	104 20
Stone	589 62
Steam roller	79 50
Bricks	66 83
Masonry	63 00

\$2,069 45

Amount paid out of Street Improvements, Ward 12 \$1,871 19

Amount paid out of Paving Division 198 26

\$2,069 45

Massachusetts avenue, Swett street to railroad bridge, macadamized; and between Columbus avenue and Tremont street, asphalted.

Labor	\$358 55
Teaming	362 50
Gravel	213 45
Stone	508 95
Plumbing	13 79
Templets	29 53
Steam roller	225 00

Amount paid to Boston Paving Company, paving with asphaltina 3,851 34

Carried forward,

\$5,563 11

<i>Brought forward,</i>	\$5,563 11
Amount paid out of Street Improve- ments, Ward 12	\$5,533 86
Amount paid out of Paving Division	29 25
	\$5,563 11

Newland street, Canton to Fabin street, macadamized.

Labor	\$187 60
Teaming	66 00
Gravel	26 05
Bricks	15 52
	\$295 17

Amount paid out of Street Improve- ments, Ward 12	\$247 15
Amount paid out of Paving Division	48 02
	\$295 17

Reed street, unfinished from 1896.

Screenings	\$351 00
Artificial stone sidewalk	30 66
Teaming	16 00
	\$397 66

Reed street, East Lenox to Northampton street, macadamized.

Labor	\$437 65
Teaming	500 00
Gravel	61 70
Stone	178 89
Paving	37 53
	\$1,215 77

Amount paid out of Street Improve- ments, Ward 12	\$1,070 65
Amount paid out of Street Improve- ments, Ward 17	36 45
Amount paid out of Paving Division	108 67
	\$1,215 77

Sharon street, macadamized, edgestone reset, gutters repaved, crossings and brick sidewalks relaid.

Labor	\$1,905 67
Teaming	992 00
Gravel	217 37
Stone	1,323 75
Steam roller	338 00
Blocks	533 25

Carried forward, \$5,310 04

<i>Brought forward,</i>	\$5,310 04
Bricks	273 00
Edgestone	25 43
Flagging	72 76
Masonry	152 00
	\$5,833 23

West Newton street, Columbus avenue to railroad bridge, macadamized, edgestone reset, brick sidewalks relaid, gutters repaved.

Labor	\$225 54
Teaming	500 50
Gravel and sand	469 44
Stone	564 29
Bricks	81 50
Amount paid to J. B. O'Rourke, paving	457 91
	\$2,299 18

Amount paid out of Street Improvements, Ward 12 \$1,649 75

Amount paid out of street improvements, Ward 10 637 48

Amount paid out of Paving Division 11 95

\$2,299 18

STREET IMPROVEMENTS, WARD 13.

B street, repaired.

Labor	\$133 40
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Baxter street, between C and E streets, macadamized, edgestone reset, gutters repaved and brick sidewalks relaid.

Labor	\$329 98
Teaming	279 00
Gravel	49 06
Bricks	120 00
Stone	407 76
Steam roller	96 67
Amount paid to Glenn & Barrett, paving	882 42

\$2,164 89

Broadway, E street to railroad bridge, paved with large granite blocks; 4-foot asphalt gutters, edgestones reset, brick sidewalks relaid.

Labor	\$5,288 45
Teaming	3,994 50

Carried forward, \$9,282 95

<i>Brought forward,</i>	\$9,282 95
Gravel and sand	1,825 15
Bricks	745 00
Blocks	8,374 88
Wharfage	352 30
Flagging	337 35
Cement	4 40
Oil	4 86
Amount paid to H. Gore & Co., asphalt-	
ing \$4,895 45	
Paving 2,952 11	
	7,847 56
	<u>\$28,774 45</u>

D street.

Labor	\$122 80
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Dorchester avenue (unfinished work from 1896).

Labor	\$207 71
Teaming	112 00
Blocks	360 10
Bricks	63 00
Gravel	80 84
Flagging	105 84
Paving	73 66
	<u>\$1,003 15</u>

First street.

Gravel	\$64 11
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Work done by the Bridge Division	<u>\$2,240 63</u>
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Work done by the Sewer Division	<u>\$445 34</u>
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STREET IMPROVEMENTS, WARD 14.

Beckler avenue, macadamized, edgestone reset, gutters repaved, brick sidewalks relaid.

Labor	\$16 10
Teaming	30 00
Stone	132 56
Bricks	56 00
Steam roller	34 00
Amount paid to Glenn & Barrett, paving	199 35
	<u>\$468 01</u>

Broadway, L to Q street, macadamized, gutters repaved, edge-stone reset, brick sidewalks relaid.

Labor	\$3,734 70
Teaming	1,893 00
Gravel and sand	900 47
Blocks	1,367 07
Bricks	610 00
Stone	2,560 60
Steam roller	37 00
Amount paid to H. Gore & Co., paving	697 20
Amount paid to Glenn & Barrett, paving	1,080 78

\$12,880 82

Broadway, in front of the Lincoln School, asphalted.

Templets	\$22 73
Amount paid to Boston Asphalt Company, asphaltting, ...	2,857 98

\$2,880 71

East Second street.

Teaming	\$158 00
Bricks	50 00

\$208 00

East Seventh street, L to N street, macadamized, edgestone reset, gutters repaved, brick sidewalks relaid.

Labor	\$253 53
Teaming	212 00
Gravel	83 63
Amount paid to Glenn & Barrett, paving	252 00
Amount paid to R. McDonough, paving	394 77

\$1,195 93

F street.

Labor	\$7 63
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Fifth street, H to I street, resurfaced.

Labor	\$189 03
Teaming	98 00
Stone	293 87

\$580 90

First street, I to L street, macadamized.

Labor	\$611 30
Teaming	391 50
Gravel	139 92
Stone	867 96

\$2,010 68

Fourth street, I to K street (work unfinished).

Labor	\$221 49
Teaming	31 00

\$252 49

I street.

Labor	\$9 50
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Jay street, Fourth to Fifth street, edgestone set.

Labor	\$502 59
Edgestone	72 29

\$574 88

K street, Broadway to Fourth street, paved with old granite blocks, edgestone reset, brick sidewalks relaid.

Labor	\$480 06
Teaming	190 50
Gravel	164 46
Blocks	567 00
Bricks	52 50
Amount paid to H. Gore & Co., paving	324 54

\$1,779 06

L street, Broadway to First street, macadamized.

Labor	\$591 39
Teaming	244 50
Gravel	161 12
Stone	592 20

\$1,589 21

L street, Seventh to Eighth street (unfinished work from 1896).

Teaming	\$184 00
Stone	177 29

\$361 29

M street, Broadway to East Second street, resurfaced one side, edgestone reset, gutters repaved, brick sidewalks relaid.

Labor	\$171 95
Teaming	77 50
Gravel	56 31
Bricks	50 00
Stone	362 09
Steam roller	74 00
Amount paid to Glenn & Barrett, paving	279 49

\$1,071 34

N street, Broadway to East Second street (one side), edgestone reset, gutters repaved, brick sidewalks relaid.

Teaming	\$115 00
Bricks	90 00
Paving	292 99

\$497 99

Ninth street, K to M street, macadamized.

Labor	\$483 45
Teaming	231 50
Gravel	173 38
Stone	868 73

\$1,757 06

O street, First to Third street, macadamized.

Labor	\$813 58
Teaming	449 00
Stone	809 64
Paving	78 36

\$2,150 58

Third street, L to M street, macadamized, edgestone reset, gutters repaved, brick sidewalks relaid.

Labor	\$378 94
Teaming	366 00
Gravel	138 27
Stone	541 69
Bricks	50 00
Amount paid to R. McDonough, paving	658 97

\$2,133 87

Work done by the Sewer Division \$247 87

STREET IMPROVEMENTS, WARD 15.

Broadway, E to Dorchester street, asphalted, edgestone reset, brick sidewalks relaid.

Teaming	\$59 50
Blocks	238 69
Gravel	271 60
Advertising	18 95
Amount paid to Boston Asphalt Company, asphaltting	5,163 34

\$5,752 08

Amount paid out of Street Improve-
ments, Ward 15 \$5,480 48

Amount paid out of Street Improve-
ments, Ward 14 271 60

\$5,752 08



COVINGTON STREET, SOUTH BOSTON, ARTIFICIAL STONE STEPS, PLATFORM AND WALLS.

Covington street, stone and artificial stone retaining-walls and fences built.

Labor	\$778 81
Advertising	32 00
Amount paid to T. F. Broderick, building retaining-walls and fences	1,062 35
Amount paid to W. A. Murtfeldt Company, building artificial stone retaining-walls	3,172 25
	\$5,045 41

East Fifth street.

Labor	\$29 35
Gravel	37 50
	\$66 85

G street.

Stone	\$90 55

Gates street, Dorchester to Eighth street, macadamized, gutters repaved, edgestone reset, brick sidewalks relaid.

Labor	\$1,170 31
Teaming	445 00
Stone	505 03
Bricks	130 00
Cement	4 40
Amount paid to W. H. Glenn, paving	1,025 22
	\$3,279 96

H street, Fourth to Fifth street, macadamized.

Labor	\$98 98
Teaming	132 50
Stone	200 06
	\$431 54

K street.

Amount retained from Boston Asphalt Company, for work done in 1896, under contract	\$162 40

Mercer street, Dorchester to Eighth street, macadamized, edgestone reset, gutters repaved and brick sidewalks relaid.

Labor	\$504 16
Teaming	312 50
Gravel	117 51
Bricks	200 00
Steam roller	106 00
Cement	8 80
Amount paid to Glenn & Barrett, paving	824 75
	\$2,073 72

Middle street, Dorchester avenue to Dorchester street, macadamized.

Labor	\$352 30
Teaming	16 00
Paving	41 54
	\$409 84

Mitchell street, macadamizing, edgestone reset, gutters repaved, brick sidewalks repaired.

Labor	\$117 73
Teaming	165 00
Stone	64 56
Gravel	84 74
Bricks	10 00
Amount paid to R. McDonough	233 07
	\$675 10

Newman street, Dorchester to Mercer street, macadamized.

Labor	\$684 85
Teaming	101 00
Stone	379 17
Steam roller	106 00
	\$1,271 02

Amount paid out of Street Improvements, Ward 15 \$955 76

Amount paid out of Street Improvements, Ward 16 315 26

\$1,271 02

Ninth street, Vale to K street, macadamized.

Labor	\$1,927 06
Teaming	362 50
Gravel	760 45
Stone	3,733 16
Steam roller	488 44
Paving	185 91
	\$7,457 52

Old Harbor street.

Gravel	\$56 00
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Telegraph street.

Gravel	\$105 50
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Thomas park, Covington to National street, macadamized.

Labor	\$567 42
Teaming	369 50

Carried forward,

\$936 92

STREET DEPARTMENT—PAVING DIVISION. 131

<i>Brought forward,</i>	\$936 92
Gravel	121 51
Stone	954 74
	\$2,013 17

Vale street, Mercer to Burnham street, macadamized.

Labor	\$135 43
Teaming	7 50
Gravel	82 51
Stone	50 59
Lumber	59 40
	\$335 43

Amount paid out of Street Improve- ments, Ward 15	\$284 73
Amount paid out of Street Improve- ments, Ward 16	50 70
	\$335 43
Work done by the Sewer Division	
	\$147 13

STREET IMPROVEMENTS, WARD 16.

Alexander street, Oleander street to Hooper avenue, macadamized, edgestone reset, gutters repaved, brick sidewalks relaid.

Labor	\$592 81
Teaming	414 00
Stone	1,032 89
Steam roller	156 00
Gravel	290 63
Amount paid to James Dolan, paying	344 44
	\$2,830 77

Andrew square, repaved with large granite blocks, edgestone reset, new crossings laid.

Labor	\$329 47
Teaming	287 00
Gravel	138 27
Flagging	643 22
Amount paid to J. B. O'Rourke	1,031 45
	\$2,429 41

Amount paid out of Street Improve- ments, Ward 16	\$2,107 80
Amount paid out of Street Improve- ments, Ward 15	321 61
	\$2,429 41

Blue Hill avenue.

Labor	\$24 60
Teaming	285 50
	<u>\$310 10</u>

Boston street, Mt. Vernon street to Edward Everett square, macadamized.

Labor	\$279 34
Teaming	63 00
Gravel	38 61
Stone	1,353 25
Steam roller	282 00
	<u>\$2,016 20</u>

Amount paid out of Street Improve- ments, Ward 16	\$1,916 95
Amount paid out of Street Improve- ments, Ward 20	84 00
Amount paid out of Paving Division, ...	15 25

\$2,016 20**Brookford street, macadamized.**

Labor	\$202 22
Teaming	317 00
Stone	150 01
Gravel	10 00
	<u>\$679 23</u>

Amount paid out of Street Improve- ments, Ward 16	\$574 16
Amount paid out of Paving Division	105 07

\$679 23**Burnham street, Dunham to Mercer street, resurfaced.**

Labor	\$426 32
Teaming	242 50
Gravel	49 06
Stone	431 56
	<u>\$1,149 44</u>

Buttonwood street, Parkway to Crescent avenue, macadamized.

Labor	\$387 00
Teaming	118 00
Gravel	71 50
Stone	866 48
Steam roller	156 00

Carried forward,\$1,598 98

STREET DEPARTMENT—PAVING DIVISION. 133

<i>Brought forward,</i>	\$1,598 98
Amount paid out of Street Improve- ments, Ward 16	\$1,469 98
Amount paid out of Paving Division	129 00
	\$1,598 98

Clapp street.

Gravel	\$31 46
Stone	100 05
	\$131 51

Dacia street.

Stone	\$95 69
Labor	70 50
	\$166 19

Amount paid out of Street Improve- ments, Ward 16	\$70 50
Amount paid out of Paving Division	95 69
	\$166 19

Dean street.

Paving	\$13 59
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Dorchester avenue, repaired.

Labor	\$92 36
Teaming	252 00
Stone	75 24
	\$419 60

Amount paid out of Street Improve- ments, Ward 16	\$344 36
Amount paid out of Paving Division	75 24
	\$419 60

Dove street.

Teaming	\$138 00
Stone	375 43
	\$513 43

Folsom street, macadamized.

Labor	\$338 14
Teaming	623 00
Stone	754 87
Steam roller	170 44

\$1,886 45**Humphreys street.**

Teaming	\$235 00
Stone	316 67
	\$551 67

Ingleside street.

Labor	\$87 60
Stone	75 00

 \$162 60

Amount paid out of Street Improve- ments, Ward 16	\$63 60
Amount paid out of Paving Division	99 00

 \$162 60
Judson street.

Labor	\$272 40
Teaming	351 00
Steam roller	312 00

 \$935 40

Amount paid out of Street Improve- ments, Ward 16	\$623 40
Amount paid out of Paving Division	312 00

 \$935 40
Julian street, resurfaced.

Labor	\$515 95
Teaming	12 00
Stone	120 00

 \$647 95

Amount paid out of Street Improve- ments, Ward 16	\$527 95
Amount paid out of Street Improve- ments, Ward 17	120 00

 \$647 95
Leyland street, resurfaced.

Labor	\$36 00
Teaming	6 00
Gravel	10 01
Steam roller	100 00

 \$152 01
Locust street.

Teaming	\$100 00
Stone	206 28

 \$306 28
Magnolia street, Quincy to Dudley street, macadamized.

Labor	\$87 32
Teaming	5 00

Carried forward,

 \$92 32

<i>Brought forward,</i>	\$92 32
Gravel	11 44
Stone	1,644 02
Steam roller	618 00
Blocks	38 51
	\$2,404 29
Amount paid out of Street Improve- ments, Ward 16	\$2,365 78
Amount paid out of Paving Division	38 51
	<u>\$2,404 29</u>

Massachusetts avenue, Edward Everett square to railroad bridge, macadamized.

Labor	\$60 90
Teaming	268 00
Gravel	143 00
Stone	572 15
	<u>\$1,044 05</u>

Monadnock street, macadamized.

Labor	\$245 25
Teaming	19 50
Gravel	33 00
Stone	679 26
Steam roller	63 00
	<u>\$1,040 01</u>

Mt. Vernon street, Dorchester avenue to Boston street, macadamized, edgestone reset, gutters repaved, brick sidewalks relaid.

Labor	\$57 86
Teaming	204 50
Gravel and sand	188 63
Stone	11 24
Bricks	575 00
Amount paid to R. McDonough, paving	244 08
	\$1,281 31

Amount paid out of Street Improve- ments, Ward 16	\$1,270 07
Amount paid out of Paving Division	11 24
	<u>\$1,281 31</u>

Virginia street.

Gravel	\$70 00
Stone	209 90
	<u>\$279 90</u>

Willow court, repaired.

Labor	\$160 20
Teaming	50 00
Stone	446 41

 \$656 61

Amount paid out of Street Improve- ments, Ward 16	\$597 11
Amount paid out of Paving Division	59 50

 \$656 61
Woodward Park street, repaired.

Labor	\$282 40
Stone	32 69

 \$315 09

Amount paid out of Street Improve- ments, Ward 16	\$314 72
Amount paid out of Paving Division	37

 \$315 09

Work done by the Sewer Division	\$382 66
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STREET IMPROVEMENTS, WARD 17.**Cottage street, Blue Hill avenue to railroad, macadamized.**

Labor	\$715 10
Teaming	913 00
Gravel	150 00
Stone	1,180 21
Steam roller	273 00

 \$3,231 31

Amount paid out of Street Improve- ments, Ward 17	\$1,543 51
Amount paid out of Street Improve- ments, Ward 16	1,554 34
Amount paid out of Paving Division	133 46

 \$3,231 31
Fellows street.

Gravel	\$5 00
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Howard avenue, macadamized.

Labor	\$46 00
Teaming	47 00
Stone	1,625 69
Steam roller	156 00
Paving	4 81

Carried forward,

 \$1,879 50

<i>Brought forward,</i>		\$1,879 50
Amount paid out of Street Improvements, Ward 17	\$537 37	
Amount paid out of Paving Division	1,342 13	
		\$1,879 50
Hudson street, macadamized.		
Teaming		\$327 00
Gravel		17 50
Stone		463 98
		\$808 48
Hunneman street, gravelled.		
Labor		\$334 85
Gravel		66 40
		\$401 25
Amount paid out of Street Improvements, Ward 17	\$5 00	
Amount paid out of Paving Division	396 25	
		\$401 25
Magazine street, Dudley to George street, macadamized, edge-stone reset, gutters repaved, brick sidewalks relaid.		
Labor		\$1,579 00
Teaming		1,119 00
Gravel		280 95
Bricks		73 50
Stone		900 92
Steam roller		104 00
Amount paid to John McCourt, paving		462 69
		\$4,520 06
Mall street, macadamized, edgestone reset, gutters repaved, brick sidewalks relaid.		
Teaming		\$191 00
Gravel		124 90
Stone		483 62
Bricks		50 00
Amount paid to Doherty & Connors		482 05
		\$1,331 57
Amount paid out of Street Improvements, Ward 17	\$723 05	
Amount paid out of Paving Division	608 52	
		\$1,331 57
Marshfield street, repaired.		
Labor		\$116 00
Teaming		40 00
		\$156 00

Mt. Pleasant avenue, macadamized, edgestone reset, gutters repaved, brick sidewalks relaid.

Labor	\$1,558 80
Teaming	1,805 00
Stone	1,509 87
Bricks	262 50
Gravel	444 65
Steam roller	156 00
Amount paid to John McCourt, paving	1,636 22
	\$7,373 04

Amount paid out of Street Improvements, Ward 17	\$7,166 71
Amount paid out of Paving Division	206 33

\$7,373 04

Pontine street, macadamized.

Teaming	\$166 00
Gravel	43 50
Stone	71 40
	\$280 90

Amount paid out of Street Improvements, Ward 17	\$271 84
Amount paid out of Paving Division	9 06

\$280 90

Shirley street, Norfolk avenue to George street, macadamized, edgestone set.

Labor	\$2,637 00
Teaming	2,058 49
Gravel	111 85
Stone	558 74
	\$5,366 08

Amount paid out of Street Improvements, Ward 17	\$4,188 14
Amount paid out of Paving Division	1,177 94

\$5,366 08

Washington street.

Teaming	\$69 00

Winslow street, macadamized, edgestone reset, gutters repaved, brick sidewalks relaid.

Labor	\$194 70
Teaming	13 00
Gravel	113 75
Stone	921 30
Amount paid to John McCourt, paving	438 29

Carried forward,

\$1,681 04

<i>Brought forward,</i>	\$1,681 04
Amount paid out of Street Improvements, Ward 17	\$639 24
Amount paid out of Paving Division	1,041 80
	\$1,681 04

Zeigler street, Washington to Dearborn street, macadamized, edgestone reset, gutters repaved, brick sidewalks relaid.

Labor	\$242 45
Teaming	1,091 00
Gravel	461 00
Stone	1,225 46
Bricks	262 00
Advertising	13 80
Amount paid to Barnes, Ruffin Company, paving	1,218 90
	\$4,514 61

Amount paid out of Street Improvements, Ward 17.	\$4,088 55
Amount paid out of Paving Division	426 06
	\$4,514 61

STREET IMPROVEMENTS, WARD 18.

Ball street, Washington street to Shawmut avenue, macadamized, edgestone reset, gutters repaved, brick sidewalks relaid.

Labor	\$1,093 29
Teaming	528 50
Gravel	133 45
Stone	318 83
Steam roller	65 00
Bricks	68 25
Amount paid to John McCourt, paving	294 00
	\$2,501 32

Amount paid out of Street Improvements, Ward 18	\$2,379 16
Amount paid out of Street Improvements, Ward 19	12 50
Amount paid out of Paving Division	109 66
	\$2,501 32

Culvert street.

Paving	\$227 76
Stone	84 60
Artificial stone sidewalk	5 28
	\$317 64

Cunard street, Tremont street to Columbus avenue, macadamized, edgestone reset, gutters repaved, brick sidewalks relaid.

Labor	\$766 15
Teaming	956 00
Gravel	108 75
Steam roller	112 78
Paving	126 31

\$2,069 99

Amount paid out of Street Improvements, Ward 18 \$1,925 96

Amount paid out of Paving Division 144 03

\$2,069 99

Dudley street, at Eliot square, macadamized.

Labor	\$346 45
Teaming	358 50
Gravel	41 00
Stone	727 78

\$1,473 73

Greenwich street.

Teaming	<u>\$8 50</u>
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Linden Park street, unfinished work from 1896.

Stone	\$1,165 84
Steam roller	20 00

\$1,185 84

Roxbury street, unfinished work from 1896.

Stone	<u>\$473 45</u>
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Ruggles street, Tremont street to the railroad, macadamized, edgestone reset, gutters repaved, brick sidewalks relaid.

Labor	\$2,081 27
Teaming	111 00
Gravel	26 25
Stone	341 51
Bricks	157 50
Blocks	594 92
Amount paid to A. Ford & Son, paving	654 35

\$3,966 80

Amount paid out of Street Improvements, Ward 18 \$2,787 21

Amount paid out of Street Improvements, Ward 19 1,106 40

Amount paid out of Paving Division 73 19

\$3,966 80

Sarsfield street, Tremont to Grinnell street, resurfaced, edgestone reset, gutters repaved, brick sidewalks relaid.

Labor	\$741 62
Teaming	758 00
Gravel	187 65
Bricks	115 51
Amount paid to Barnes, Ruffin Company, paving .	246 76

\$2,049 54

Amount paid out of Street Improvements, Ward 18	\$2,022 94
Amount paid out of Paving Division	26 60

\$2,049 54

Walpole street, Columbus avenue to Tremont street, resurfaced, edgestone reset, gutters repaved, brick sidewalks relaid.

Labor	\$295 60
Teaming	500 00
Gravel	75 50
Stone	24 96
Bricks	52 50
Steam roller	117 00
Amount paid to A. Ford & Son, paving	174 16

\$1,239 72

Amount paid out of Street Improvements, Ward 18	\$1,200 72
Amount paid out of Paving Division	39 00

\$1,239 72

Washington street.

Gravel	\$97 20
Blocks	16 50
Sand	32 40

\$146 10

Westminster street, resurfaced.

Labor	\$206 64
Stone	194 12
Paving	169 40

\$570 16

Amount paid out of Street Improvements, Ward 18	\$376 04
Amount paid out of Paving Division	194 12

\$570 16

Weston street, Tremont street to Columbus avenue, edgestone reset, gutters repaved, brick sidewalks relaid.

Labor	\$435 75
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Carried forward,

\$435 75

<i>Brought forward,</i>	\$435 75
Teaming	414 00
Gravel	95 00
Bricks	52 50
Amount paid to A. Ford & Son, paving . . .	247 54
	<u>\$1,244 79</u>

Williams street, Washington street to Shawmut avenue, macadamized, edgestone reset, gutters repaved, brick sidewalks relaid.

Labor	\$997 15
Teaming	1,376 50
Gravel and sand	368 15
Stone	888 19
Bricks	157 50
Steam roller	312 00
Amount paid to John McCourt, paving . . .	815 54
	<u>\$4,915 03</u>

Amount paid out of Street Improvements, Ward 18	\$4,337 91
Amount paid out of Paving Division	577 12
	<u>\$4,915 03</u>

Work done by the Sewer Division	<u>\$268 55</u>
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STREET IMPROVEMENTS, WARD 19.

Autumn street.

Labor	\$55 95
Teaming	136 50
	<u>\$192 45</u>

Bellevue street, macadamized.

Labor	\$80 75
Teaming	882 00
Stone	424 72
	<u>\$1,387 47</u>

Bromley street, resurfaced.

Labor	\$97 00
Teaming	89 00
Stone	274 07
Steam roller	156 00
Blocks	8 25
Paving	152 86
	<u>\$777 18</u>

<i>Carried forward,</i>	\$777 18
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<i>Brought forward,</i>	\$777 18
Amount paid out of Street Improve- ments, Ward 19	\$490 04
Amount paid out of Street Improve- ments, Ward 21	89 00
Amount paid out of Street Improve- ments, Ward 22	152 86
Amount paid out of Paving Division	45 28
	\$777 18

Brookline avenue.

Teaming	\$83 50
Stone	75 12
	\$158 62

Centre street, at Marcella street, repaired, stone wall and iron fence built.

Labor	\$771 00
Teaming	785 00
Gravel	25 00
Stone	272 70
Cement	79 45
White lead	7 73
Flagging	102 27
Stone wall	150 00
Iron fence	165 00
	\$2,358 15

Amount paid out of Street Improve- ments, Ward 19	\$2,345 65
Amount paid out of Paving Division	12 50
	\$2,358 15

Conant street, Parker to Phillips street, macadamized, edgestone reset, gutters repaved, brick sidewalks relaid.

Labor	\$954 08
Teaming	451 05
Gravel	442 10
Stone	164 74
Flagging	56 11
Amount paid to Thomas O'Leary, paving	287 22
	\$2,355 30

Amount paid out of Street Improve- ments, Ward 19	\$2,351 54
Amount paid out of Paving Division	3 76
	\$2,355 30

Elmwood street.

Teaming	\$43 50
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Faxon street.

Sand	\$2 60
Gravel	13 75
	<u>\$16 35</u>

Greenwich street.

Gravel	<u>\$6 25</u>
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Heath place, resurfaced.

Labor	\$348 23
Teaming	54 00
Gravel	212 00
Stone	40 89
Flagging	107 63
Paving	14 46
	<u>\$777 21</u>

Highland street.

Teaming	<u>\$15 00</u>
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Huntington avenue.

Teaming	<u>\$330 00</u>
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King street.

Labor	\$238 20
Teaming	98 00
Gravel	13 75
	<u>\$349 95</u>

Amount paid out of Street Improve- ments, Ward 19	\$343 70
Amount paid out of Paving Division	6 25
	<u>\$349 95</u>

Lawn street.

Stone	\$126 97
Teaming	168 00
	<u>\$294 97</u>

Linwood street.

Teaming	\$103 00
Gravel	7 50
	<u>\$110 50</u>

**Longwood avenue, Huntington avenue to Brookline avenue,
macadamized, edgestone reset, gutters repaved, brick sidewalks
relaid.**

Labor	\$4,383 64
Teaming	3,054 00

Carried forward,\$7,437 64

<i>Brought forward,</i>	\$7,437 64
Gravel and sand	464 77
Bricks	55 00
Stone	2,384 05
Steam roller	663 00
Flagging	63 00
Fuel	84 60
Amount paid to William Higgins, paving . . .	955 91
	\$12,107 97

Marcella street.

Teaming	\$113 00
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Minden street, macadamized.

Labor	\$947 87
Teaming	1,035 00
Gravel	15 00
Stone	712 73
Steam roller	208 00
Flagging	29 68
	\$2,948 28

Amount paid out of Street Improve-
ments, Ward 19 \$1,585 41

Amount paid out of Street Improve-
ments, Ward 22 1,331 37

Amount paid out of Paving Division . . . 31 50

\$2,948 28

Parker street.

Labor	\$4 00
Teaming	21 00
Sand	10 00
Gravel	4 05
Stone	42 41
	\$81 46

Smith street (unfinished work from 1896).

Stone	\$668 54
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Station street, Columbus avenue to Parker street, resurfaced, edgestone reset, gutters repaved, brick sidewalks relaid.

Labor	\$1,133 65
Gravel and sand	61 00
Stone	6 44
Flagging	30 24
Amount paid to Barnes, Ruffin Company paving .	692 53
	\$1,923 86

Wait street, repaired.

Labor	\$72 60
Filling	173 23

\$245 83

Walden street.

Teaming	\$27 00
Gravel	10 00

\$37 00

Amount paid out of Street Improve-
ments, Ward 19

\$27 00

Amount paid out of Paving Division

10 00

\$37 00

Wigglesworth street, (unfinished work from 1896).

Labor	\$20 00
Teaming	20 00
Steam roller	91 00

\$131 00

Work done by the Sewer Division

\$829 54

STREET IMPROVEMENTS, WARD 20.**Auckland street, macadamized.**

Labor	\$80 60
Teaming	264 50
Stone	795 92
Steam roller	52 00
Paving	30 69

\$1,223 71

Barrington street, edgestone set, gutters paved.

Paving	\$73 26
Gravel	42 90
Teaming	6 00

\$122 16

Blue Hill and Lawrence avenues, repaired.

Stone	\$89 59
Teaming	77 00
Gravel	30 03

\$196 62

Bradlee street, resurfaced.

Labor	\$39 00
Teaming	217 00
Stone	313 33
Paving	5 90
	\$575 23

Charles street, macadamized.

Labor	\$326 20
Teaming	543 50
Gravel	50 05
Stone	721 63
Paving	16 79
	\$1,658 17

Cushing avenue, repaired.

Labor	\$61 80
Teaming	171 50
Stone	64 97
Paving	30 41
	\$328 68

Dorchester avenue, repaired.

Stone	\$499 96
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Grampianway.

Labor	\$75 20
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Greenwich street, macadamized, gutters paved.

Labor	\$687 09
Teaming	626 50
Gravel	286 00
Stone	1,173 85
Steam roller	78 00
Amount paid to James Dolan, paving	235 35

\$3,086 79

Amount paid out of Street Improve-
ments, Ward 20 \$2,937 99

Amount paid out of Street Improve-
ments, Ward 24 148 80

\$3,086 79

Hancock street.

Labor	\$135 60
Stone	70 17
Paving	12 68
	\$218 45

Harvard street, Blue Hill avenue to School street, macadamized.

Labor	\$229 00
Teaming	1,305 50
Stone	2,058 10
Artificial stone sidewalks	45 24

 \$3,637 84

Amount paid out of Street Improvements, Ward 20 \$3,352 43

Amount paid out of Street Improvements, Ward 24 285 41

 \$3,637 84
Lyons street, macadamized.

Labor	\$254 57
Teaming	164 50
Stone	422 30

 \$841 37
Mayfield street, Dorchester avenue to Pleasant street, macadamized.

Labor	\$12 00
Teaming	85 00
Gravel	30 03
Stone	289 43

 \$416 46
Northern avenue.

Edgestone	\$18 85
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Park square, repaired.

Labor	\$127 50
Teaming	76 00
Stone	14 40
Paving	58 70

 \$276 60
Pleasant street, Savin Hill avenue to Stoughton street, macadamized.

Labor	\$24 00
Teaming	63 00
Stone	205 98

 \$292 98
Quincy street, Bowdoin street to New England Railroad, macadamized.

Labor	\$539 50
Teaming	283 77

Carried forward,

 \$823 27

<i>Brought forward,</i>	\$823 27
Gravel	202 78
Stone	1,688 60
Steam roller	476 00
Edgestone	14 30
Paving	136 25
	\$3,341 20

Amount paid out of Street Improvements, Ward 20	\$3,023 75
Amount paid out of Street Improvements, Ward 16	220 50
Amount paid out of Street Improvements, Ward 21	25 45
Amount paid out of Street Improvements, Ward 24	71 50
	<u>\$3,341 20</u>

Savin Hill avenue, Dorchester avenue to Grampianway,
macadamized.

Labor	\$423 77
Teaming	130 00
Gravel	163 02
Stone	696 34
Steam roller	384 00
	\$1,797 13

Amount paid out of Street Improvements, Ward 20	\$1,616 99
Amount paid out of Paving Division	180 14
	<u>\$1,797 13</u>

Shamrock street, macadamized.

Labor	\$358 10
Teaming	387 00
Gravel	143 00
Stone	451 77
Steam roller	78 00
Paving	155 37
	<u>\$1,573 24</u>

Topliff street, Westville to Longfellow street, macadamized.

Labor	\$40 00
Teaming	210 00
Stone	57 20
	<u>\$307 20</u>

Washington street, Bowdoin to Centre street, macadamized.

Labor	.	.	.	.	.	.	.	\$343 59
Teaming	.	.	.	.	.	.	.	692 50
Stone	.	.	.	.	.	.	.	666 83
Paving	.	.	.	.	.	.	.	25 23

\$1,728 15

Amount paid out of Street Improvements,

Ward 20 \$978 21

Amount paid out of Street Improvements,

Ward 24 503 40

Amount paid out of Paving Division . 246 54

\$1,728 15

Westville street, repaired.

Labor	.	.	.	.	.	.	.	\$123 50
Teaming	.	.	.	.	.	.	.	75 00

\$198 50

STREET IMPROVEMENTS, WARD 21.

Bainbridge street, repaired.

Labor	.	.	.	.	.	.	.	\$70 00
Teaming	.	.	.	.	.	.	.	257 00
Gravel	.	.	.	.	.	.	.	20 00

\$347 00

Amount paid out of Street Improvements,

Ward 21 \$232 25

Amount paid out of Paving Division . 114 75

\$347 00

Cheney street.

Paving	.	.	.	.	.	.	.	\$30 87
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Cliff street, Warren to Washington street, macadamized, edge-stone reset, gutters repaved, brick sidewalks relaid.

Labor	.	.	.	.	.	.	.	\$1,013 61
Teaming	.	.	.	.	.	.	.	692 50
Gravel	.	.	.	.	.	.	.	242 90
Bricks	.	.	.	.	.	.	.	77 00
Stone	.	.	.	.	.	.	.	690 28
Steam roller	.	.	.	.	.	.	.	91 00
Amount paid to Barnes, Ruffin Company, paving	.	.	.	.	.	.	.	757 44

\$3,564 73

Copeland street.

Gravel	.	.	.	.	.	.	.	\$11 25
Teaming	.	.	.	.	.	.	.	28 00

\$39 25

Elm Hill avenue, macadamized.

Labor	\$577 67
Teaming	1,143 50
Gravel	22 30
Stone	1,817 37
Steam roller	247 00
Paving	33 58
Hardware	1 58
	\$3,843 00

Galena street.

Teaming	\$595 50
Gravel	15 00
Amount paid to John McCourt, paving	438 59
	\$1,049 09

Gaston street.

Gravel	\$7 00
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Georgia street.

Labor	\$51 47
Gravel	13 75
	\$65 22

Glenwood street, macadamized, edgestone reset, gutters re-paved, brick sidewalks relaid.

Labor	\$408 10
Teaming	355 50
Brick	71 00
Gravel and sand	175 05
Stone	212 44
Amount paid to Barnes, Ruffin Company, paving	465 15
	\$1,687 24

Hamerton street.

Gravel	\$6 25
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Holborn street, unfinished work from 1896.

Stone	\$997 66
Steam roller	150 00
Teaming	33 00
	\$1,180 66

Humboldt avenue.

Labor	\$146 95
Teaming	433 00

*Carried forward,***\$579 95**

<i>Brought forward,</i>	\$579 95
Gravel	50 80
Steam roller	130 00
Paving	165 51

\$926 26

Lansing street.

Labor	\$17 50
Gravel	5 30

\$22 80

Laurel street, macadamized.

Labor	\$251 35
Teaming	408 00
Stone	545 16

\$1,204 51

Maple street, macadamized, edgestone reset, gutters repaved, sidewalks relaid.

Teaming	\$412 50
Gravel and sand	191 70
Stone	902 66
Amount paid to John McCourt, paving	704 07

\$2,210 93

Mayfair street, macadamized.

Labor	\$239 60
Teaming	273 00
Gravel	9 50
Stone	223 57
Steam roller	208 00

\$953 67

Maywood street.

Sand and gravel	\$5 00
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Rockland street.

Gravel	\$39 65
Teaming	13 00

\$52 65

Ruthven street, unfinished work from 1896.

Stone	\$2,097 19
Steam roller	140 00
Gravel	3 75

\$2,240 94

Schuyler street.

Paving	\$61 60
Gravel	11 25
	\$72 85

Walnut avenue.

Teaming	\$194 50
Stone	1,303 83
Gravel and sand	122 35
	\$1,620 68

Warren street, Waverly to Quincy street, macadamized, edgestones reset, gutters repaved.

Labor	\$674 73
Teaming	1,037 50
Gravel and sand	409 20
Bricks	22 00
Stone	260 83
Steam roller	383 50
Amount paid to John McCourt, paving	812 70
	\$3,600 46

Washington street.

Teaming	\$114 50
Gravel	27 95
	\$142 45

Wayne street.

Paving	\$34 98

Wenonah street, macadamized, edgestone reset, gutters repaved, brick sidewalks laid.

Labor	\$469 84
Teaming	359 50
Stone	583 58
Gravel and sand	120 70
Bricks	105 00
Steam roller	13 22
Amount paid to John McCourt, paving	541 84
	\$2,193 68

Winthrop street.

Bricks	\$49 35
Gravel	5 60
	\$54 95

STREET IMPROVEMENTS, WARD 22.

Amory street.

Paving	\$20 00
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Arcadia street, macadamized, edgestone reset, gutters paved, sidewalks relaid.

Labor	\$180 90
Steam roller	39 00
Amount paid to Barnes, Ruffin Company, paving .	669 70

\$889 60

Arklow street.

Gravel	\$31 70
Stone	65 78
Teaming	235 00

\$332 48

Amount paid out of Street Improvements,

Ward 22	\$235 00
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Amount paid out of Street Improvements,

Ward 19	31 70
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Amount paid out of Paving Division .	65 78
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\$332 48

Atherton street, Washington to Amory street, macadamized, edgestone reset, gutters repaved, brick sidewalks relaid, crossings laid.

Labor	\$2,648 55
Teaming	2,860 00
Gravel and sand	432 75
Bricks	75 00
Flagging	92 73
Stone	1,579 90
Steam roller	208 00
Amount paid to Barnes, Ruffin Company, paving .	1,170 77

\$9,067 70

Amount paid out of Street Improvements,

Ward 22	\$8,278 50
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Amount paid out of Street Improvements,

Ward 19	789 20
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\$9,067 70

Bickford street, edgestone set.

Teaming	\$98 25
Paving	33 50

\$131 75

Boylston street, Washington street to railroad, macadamized.

Labor	\$171 70
Teaming	28 00
Stone	1,368 25
Paving	29 32

 \$1,597 27

Amount paid out of Street Improvements,

Ward 22 \$867 58

Amount paid out of Paving Division . 729 69

 \$1,597 27
Brookline avenue, repaired.

Stone	\$596 56
Gravel	44 50
Teaming	238 50

 \$879 56
Centre street, N. Y., N. H. & H. R.R. to Corey street, edge-stone reset, gutters repaved.

Paving	\$362 09
Gravel	13 10

 \$375 19

Amount paid out of Street Improvements,

Ward 22 \$362 09

Amount paid out of Paving Division . 13 10

 \$375 19
Creighton street, macadamized, edgestones set, gutters repaved.

Teaming	\$270 53
Stone	1,074 40
Gravel	78 75
Paving	86 57

 \$1,510 25
Day street.

Teaming	\$26 00
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Forbes street, macadamized.

Labor	\$97 40
Teaming	268 50
Gravel	50 30
Stone	63 33

 \$479 53

Amount paid out of Street Improve-

ments, Ward 22 \$268 50

Amount paid out of Paving Division . 211 03

 \$479 53

Heath street, repaired.

Stone	\$97 51
Teaming	197 00

 \$294 51

 Amount paid out of Street Improve-
ments, Ward 22

\$197 00

Amount paid out of Paving Division

97 51

 \$294 51
Paul Gore street.

Teaming	\$24 00
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Ritchie street.

Amount paid to H. P. Nawn, excavating	\$1,118 40
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School street, macadamized, edgestone reset, gutters repaved, sidewalks relaid, crossings laid.

Labor	\$430 10
Teaming	1,289 00
Gravel	175 60
Flagging	60 03
Stone	1,263 03
Steam roller	52 00
Amount paid to Barnes, Ruffin Company, paving	574 54

 \$3,844 30

 Amount paid out of Street Improve-
ments, Ward 22

\$3,794 96

Amount paid out of Paving Division

49 34

 \$3,844 30
Washington street, repaired.

Stone	\$222 72
Flagging	35 84

 \$258 56

 Amount paid out of Street Improve-
ments, Ward 22

\$222 72

Amount paid out of Paving Division

35 84

 \$258 56

Work done by the Sewer Division

 \$591 28
STREET IMPROVEMENTS, WARD 23.**Ashley street, repaired.**

Labor	\$207 13
Teaming	37 50

 \$244 63

 Amount paid out of Street Improve-
ments, Ward 23

\$229 63

Amount paid out of Paving Division

15 00

 \$244 63

Baker street, Spring street to Newton line, resurfaced.

Labor	\$333 65
Teaming	978 00
Gravel	267 00
Stone	762 21
	\$2,340 86

Beech street, Washington street to Anawan avenue, filled and resurfaced.

Labor	\$432 50
Teaming	160 50
Gravel	111 25
Stone	750 00
Filling	783 00
Paving	46 25
	\$2,283 50

Boylston street, repaired.

Gravel	\$163 76
Teaming	336 00
	\$499 76

Burnett street, macadamized.

Labor	\$198 75
Stone	922 66
Steam roller	130 00
	\$1,251 41

Amount paid out of Street Improve-
ments, Ward 23 \$1,121 41

Amount paid out of Paving Division 130 00

\$1,251 41

Call street, Keyes street to the depot, macadamized.

Labor	\$85 00
Teaming	361 00
Gravel	111 25
Stone	994 59
Advertising	7 50

\$1,559 34

Centre street, South to May street, macadamized.

Labor	121 10
Teaming	228 00
Stone	2,128 06
Steam roller	78 00
Paving	46 23
Artificial stone sidewalks	135 48

\$2,736 87

Corey street, resurfaced.

Labor	\$36 00
Teaming	54 50
Stone	337 92

 \$428 42

Cornwall street, resurfaced.

Teaming	\$294 50
Gravel	26 70

 \$321 20

Amount paid out of Street Improve- ments, Ward 23	\$216 20
Amount paid out of Street Improve- ments, Ward 22	105 00

 \$321 20

Green street, Washington to Centre street, macadamized.

Labor	\$198 50
Teaming	72 00
Gravel	44 50
Stone	988 93
Steam roller	143 00

 \$1,446 93

Amount paid out of Street Improve- ments, Ward 23	\$1,303 93
Amount paid out of Paving Division	143 00

 \$1,446 93

Keyes street, South street to Stony brook, macadamized, gutters paved.

Labor	\$321 50
Teaming	341 50
Gravel	66 75
Stone	1,201 17
Steam roller	130 00
Amount paid to James Dolan, paving	184 88

 \$2,245 80

Amount paid out of Street Improve- ments, Ward 23	\$1,610 08
Amount paid out of Paving Division	635 72

 \$2,245 80

Montview street.

Labor	\$18 00
Teaming	78 00

 \$96 00

Mt. Vernon street.

Gravel	\$22 25
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Perkins street, Prince street to Parkway, macadamized.

Labor	\$45 00
Teaming	117 00
Stone	511 85
	\$673 85

Pond street, resurfaced.

Teaming	\$54 00
Stone	156 09
	\$210 09

South street, Spaulding to Centre street, macadamized.

Labor	\$12 00
Teaming	216 50
Gravel	54 29
Stone	1,091 39
	\$1,374 18

Spring street, Centre street to Dedham line, macadamized.

Labor	\$419 00
Teaming	878 00
Gravel	66 75
Stone	1,990 38
	\$3,354 13

Tappan street, macadamized, edgestone set, gutters paved.

Labor	\$553 35
Teaming	554 16
Gravel	113 03
Stone	426 14
Amount paid to James Dolan, paving	133 20
	\$1,779 88

Varney street.

Gravel	\$44 50
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Walk Hill street, edgestone set, gutters paved.

Labor	\$226 00
Teaming	269 02
Paving	88 09
	\$583 11

Amount paid out of Street Improve- ments, Ward 23	\$304 79
Amount paid out of Paving Division	278 32

\$583 11

Washington street, Boylston to Cornwall street, resurfaced.

Labor	\$69 45
Teaming	238 50
Stone	500 00
Paving	72 86
Artificial stone sidewalk	23 58

\$904 39

Weld Hill street, resurfaced.

Labor	\$52 50
Teaming	268 50
Gravel	89 00
Stone	32 97
Amount paid to James Dolan, paving	372 95

\$815 92

Williams street, repaired.

Labor	\$253 70
Teaming	460 00

\$713 70

Amount paid out of street Improve- ments, Ward 23	\$460 00
Amount paid out of Paving Division	253 70

\$713 70

STREET IMPROVEMENTS, WARD 24.

Ashmont street, Dorchester avenue to Adams street, macadamized.

Labor	\$204 60
Teaming	251 61
Gravel	15 73
Stone	630 37

\$1,102 31

Amount paid out of Street Improve- ments, Ward 24	\$470 10
Amount paid out of Paving Division	632 21

\$1,102 31

Blue Hill avenue.

Labor	\$142 90
Stone	4 17

\$147 07

Amount paid out of Paving Division	\$147 07
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Butler street, repaired.

Labor	\$60 60
Teaming	125 00
Stone	172 87

 \$358 47

 Amount paid out of Street Improve-
 ments, Ward 24 \$185 60

Amount paid out of Paving Division . 172 87

 \$358 47
Centre street, Centre avenue to Adams street, macadamized.

Labor	\$197 50
Teaming	373 91
Stone	870 85

 \$1,442 26

 Amount paid out of Street Improve-
 ments, Ward 24 \$1,236 93

 Amount paid out of Street Improve-
 ments, Ward 20 45 08

Amount paid out of Paving Division . 160 25

 \$1,442 26
Corbett street.

Stone	\$30 75
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Dix street, repaired.

Stone	\$142 62
Teaming	126 00

 \$268 62

 Amount paid out of Street Improve-
 ments, Ward 24 \$116 00

Amount paid out of Paving Division . 152 62

 \$268 62
Euclid street, repaired.

Labor	\$36 00
Teaming	230 50
Stone	214 70

 \$481 20

 Amount paid out of Street Improve-
 ments, Ward 24 \$266 50

Amount paid out of Paving Division . 214 70

 \$481 20
Evans street, repaired.

Stone	\$253 96
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 Amount paid out of Street Improve-
 ments, Ward 24 \$214 50

Amount paid out of Paving Division . 39 46

 \$253 96

Marsh street.

Teaming	\$8 00
Stone	46 76

 \$54 76

 Amount paid out of Street Improve-
ments, Ward 24

\$8 00

Amount paid out of Paving Division

46 76

 \$54 76
Medway street, Adams street to the railroad, macadamized.

Labor	\$87 25
Teaming	208 00
Stone	317 29

 \$612 54

 Amount paid out of Street Improve-
ments, Ward 24

\$590 96

Amount paid out of Paving Division

21 58

 \$612 54
Milton avenue, Norfolk to Edson street, macadamized.

Labor	\$562 00
Teaming	333 13
Gravel	71 50
Stone	324 33
Paving	79 23

 \$1,370 19

 Amount paid out of Street Improve-
ments, Ward 24

\$1,286 26

Amount paid out of Paving Division

83 93

 \$1,370 19
Morton street, Blue Hill avenue to Sanford street, macadamized.

Labor	\$177 60
Teaming	259 00
Gravel	38 61
Stone	526 91

 \$1,002 12

 Amount paid out of Street Improve-
ments, Ward 24

\$944 02

Amount paid out of Paving Division

58 10

 \$1,002 12
Neponset avenue.

Labor	\$48 00
Stone	124 31

 \$172 31

Norfolk street, Walk Hill street to Mattapan square, macadamized.

Labor	\$354 95
Teaming	1,329 50
Gravel	135 85
Stone	3,373 16
Steam roller	169 00

 \$5,362 46

Amount paid out of Street Improvements, Ward 24 \$4,582 47

Amount paid out of Street Improvements, Ward 20 664 99

Amount paid out of Paving Division 115 00

 \$5,362 46

Richmond street, Adams street to Dorchester avenue, macadamized.

Labor	\$132 60
Teaming	212 50
Stone	270 50

 \$615 60

Amount paid out of Street Improvements, Ward 24 \$397 93

Amount paid out of Paving Division, ... 217 67

 \$615 60

Sanford street, macadamized.

Labor	\$116 00
Teaming	697 50
Gravel	203 06
Stone	958 82
Steam roller	26 00

 \$2,001 38

Talbot avenue, Washington street to the bridge, constructed.

Labor	\$2,403 95
Teaming	2,962 00
Gravel	344 63

 \$5,710 58

Amount paid out of Street Improvements, Ward 24 \$3,260 96

Amount paid out of Street Improvements, Ward 20 1,634 02

Amount paid out of Paving Division, ... 815 60

 \$5,710 58

Tenean street, Freeport to Fulton street, macadamized, plankwalks and fences built.

Labor	\$988 27
Teaming	1,357 00
Gravel	900 90
Stone	7,007 63
Steam roller	728 00
Lumber	436 08

\$11,417 88

Amount paid out of Street Improvements, Ward 24 \$6,388 45

Amount paid out of Paving Division 5,029 43

\$11,417 88

STREET IMPROVEMENTS, WARD 25.

Aldie street, Franklin to Athol street, macadamized, gutters paved.

Labor	\$258 67
Teaming	442 00
Gravel	131 97
Stone	179 10
Steam roller	78 10
Advertising	7 34

Amount paid out to Geo. H. Wentworth & Co., paving

270 45

\$1,367 53

Bayard street, North Harvard to Myrick street, macadamized, gutters repaved.

Labor	\$308 02
Teaming	198 00
Stone	51 15
Gravel	268 71
Steam roller	39 00
Amount paid to James Grant, paving	218 57

\$1,083 45

Cambridge and Warren street, in front of High School, macadamized, edgestone set, gutters paved, brick sidewalks laid.

Labor	\$419 75
Teaming	361 50
Gravel	275 07
Stone	1,006 38
Amount paid to G. H. Wentworth & Co., paving	276 76

\$2,339 46

Chestnut Hill avenue, corner Beacon street, macadamized,
edgestone set, gutters paved.

Labor	\$1,065 44
Teaming	476 50
Gravel	38 16
Stone	670 23
Edgestone	116 57
Amount paid to G. H. Wentworth & Co., paving .	183 65
	\$2,550 55

Foster street, Washington to Surrey street, macadamized,
gutters paved, sidewalks concreted.

Labor	\$299 10
Teaming	222 50
Gravel	205 11
Stone	92 40
Steam roller	52 00
Amount paid to James Grant, paving	148 22
Concrete sidewalks	59 00
	\$1,078 33

Harvard avenue,

Teaming	\$9 00

Leicester street, Surrey to Bennett street, macadamized.

Labor	\$599 84
Teaming	404 50
Gravel	537 42
Stone	508 20
Steam roller	65 00
Flagging	34 02
Paving	36 34
	\$2,185 32

Lincoln street, Market to Cambridge street, macadamized,
edgestone set, gutters paved.

Labor	\$2,242 60
Teaming	1,851 50
Gravel	370 47
Stone	2,388 85
Steam roller	221 00
Amount paid to James Grant, paving	1,445 94
	\$8,520 36

Linden street, Commonwealth avenue to Cambridge street,
macadamized, edgestone set, gutters paved.

Labor	\$1,729 34
Teaming	912 59
Gravel	190 80
Stone	1,471 80
Steam roller	273 00
Artificial stone sidewalk	37 08
Amount paid to James Grant, paving	567 60

\$5,182 21
Menlo street.

Labor	\$79 75
Paving	19 11

\$98 86
Myrick street, Bayard to Franklin street, resurfaced.

Labor	\$154 85
Teaming	166 50
Gravel	41 34
Stone	18 15

\$380 84
North Beacon street, Market street to the river, macadamized.

Labor	\$717 86
Teaming	289 00
Gravel	1,465 98
Stone	1,202 85
Steam roller	143 00
Advertising	3 66
Paving	13 62

\$3,835 97
North Harvard street.

Labor	\$95 50
Teaming	210 50
Stone	176 75

\$482 75
Parsons street.

Paving	\$28 67
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Portsmouth street, Lincoln to Waverly street, macadamized.

Labor	\$386 25
Teaming	97 50
Gravel	310 05
Steam roller	39 00
Sundries	20 00

\$852 80

Riverdale street, resurfaced.

Labor	\$114 00
Teaming	115 00
Stone	79 20
Steam roller	104 00
	<u>\$412 20</u>

Surrey street, Market to Foster street, macadamized; and from Foster to Parsons street, gutters paved, crossings laid.

Labor	\$884 68
Teaming	307 50
Gravel	329 13
Stone	1,120 35
Steam roller	156 00
Flagging	63 26
Artificial stone sidewalk	45 28
Paving	115 63
	<u>\$3,021 83</u>

Washington street, Commonwealth avenue to Brookline line, macadamized, edgestone set, gutters paved.

Labor	\$1,080 47
Teaming	306 00
Gravel	445 20
Stone	2,438 15
Steam roller	182 00
Amount paid to Daniel Kiley, paving	361 89
	<u>\$4,813 71</u>

Waverly street, Market street to Western avenue, macadamized.

Labor	\$91 35
Teaming	208 50
Gravel	114 48
Stone	72 11
Steam roller	65 00
	<u>\$551 44</u>

Work done by the Bridge Division \$485 00

Work done by the Sewer Division \$82 76

Work done for the Sewer Division and charged to the following appropriations:

Sewer Division	\$666 66
Laying out and Construction of Highways, Sewer Construction	<u>\$285 15</u>
Canal-street relief sewer	<u>\$48 60</u>

*SUMMARY OF EXPENDITURES UNDER
SPECIAL APPROPRIATIONS.*

TOTAL AMOUNT EXPENDED.

Abbotsford street, Ward 21	\$3,064 59
Adams street (Dorchester)	9,417 84
Adelaide street, Ward 22	6,461 50
Albany street	6,883 07
Appleton street	14,629 00
Boylston street, Berkeley to Clarendon	12,496 90
Cabot street, Linden Park to Vernon street	6,770 47
Calumet street	399 65
Carleton street	420 71
Centre street (Dorchester)	8,414 76
Centre street (Roxbury), Hog bridge to Day street	9,660 63
Centre street, Ward 23, Maple to Spring street	10,857 70
Charles street	28,237 28
Commonwealth avenue	31,852 99
Congress and L streets	2,958 61
Dudley street	38,710 43
Franklin street, Ward 25	2,240 70
Freeport street, Ward 24	93 75
Gold-street bridge	27,223 38
Lamartine street, Ward 22	10,500 67
Lincoln place	1,500 00
McLellan street	3,964 69
North Margin street	2,824 14
Quincy street, Ward 4 (now St. Martin street)	3,516 44
Rand street	2,930 33
South Union Station	7,036 98
State street	27,964 06
Sydney street, Ward 20	5,560 54
Tremont street, Lenox street to Roxbury crossing, Unity street	35,195 11
Washington street, Dover to Waltham street	2,815 09
Washington street, Eliot to Dover street	27,204 68
Washington street, Eliot to Dover street	55,630 38
Western avenue	13,689 48
Wharf and buildings, East Boston	15,000 00
Street Improvements, Ward 1 :	
Bennington street	69 00
Border street	19,739 17
Bremen street	2,942 43
Brooks street	35 00
Byron street	65 80
Condor street	1,183 96
Glendon street	529 78

Carried forward,

\$460,692 69

<i>Brought forward,</i>	\$460,692 69
Homer street	229 60
Horace street	193 70
Lexington street	8,598 35
Meridian street	525 36
Moore street	2,655 14
Prescott street	386 25
Princeton street	433 35
Putnam street	353 75
Saratoga street	2,949 68
Sumner street	75 33
Walley street	1,034 63
West Eagle street	315 76
White street	135 25
Sewer Division	148 16
Street Improvements, Ward 2 :	
Chelsea street	119 00
Everett street	8,548 72
Ferry avenue	105 96
Havre street	419 87
Lamson street	56 00
Liverpool street	490 68
London street	1,265 47
Maverick street	824 88
Morris street	140 00
Porter street	1,337 92
Sewer Division	211 36
Street Improvements, Ward 3 :	
Concord street	2,211 93
Decatur street	4 90
High street	678 65
Hull street	275 10
Lexington street	5,196 17
Medford street	99 10
Monument street	2,093 49
Princeton street	8 55
Sprague street	1 50
Trenton street	1,910 86
Vine, Tufts, Moulton and Corey streets	12,955 77
Sewer Division	19 48
Street Improvements, Ward 4 :	
Alford street	4,381 16
Arlington avenue	531 16
Auburn street	1,860 93
Baldwin street	4,356 77
Beacham street	762 30
Dorrance street	1,272 11
Gardner street	140 10
Main street	22,557 04

Carried forward,\$553,563 93

<i>Brought forward,</i>	\$553,563 93
Mead street	1,426 48
Short street	178 10
Sullivan street	2,699 57
Walker street	80 00
Sewer Division	23 01
Street Improvements, Ward 5 :	
Adams street	2,892 68
Boyle street	507 58
Charles-river avenue	203 07
Common street	2,328 17
Devens street	3,145 56
Joiner street	25 50
Parker street	1,453 56
Putnam street	34 50
Rutherford avenue	366 01
Warren avenue	847 23
Water street	162 60
Sewer Division	1 63
Street Improvements, Ward 6 :	
Atlantic avenue	755 42
Batterymarch street	64 33
Beacon street	36 00
Blackstone street	266 35
Bulfinch street	2,070 14
Clark street	1,550 61
Commercial street	282 05
Congress street	3,838 40
Cooper street	1,376 04
Foster street	813 24
Hanover street	138 51
Harris street	217 76
Lafayette avenue	540 77
Lime alley	391 18
North street	1,968 98
Somerset street	316 07
Subway repairs	179 80
Water street	98 67
Wiget street	1,671 65
Street Improvements, Ward 7 :	
Atlantic avenue	351 45
Avery street	1,304 18
Boylston street	863 20
Chauncy street	61 00
Congress street	2,281 19
Corning street	68 08
Dix place	1,189 09
Exeter place	1,038 52
La Grange street	1,438 81
<i>Carried forward,</i>	\$595,110 67

<i>Brought forward,</i>	\$595,110 67
Mason street	607 85
Ohio street	39 56
Park street	734 32
Pine street	85 13
Wendell street	1,082 54
Winthrop square	11,475 21
Street Improvements, Ward 8 :	
Bowdoin street	728 80
Chambers street	473 21
Derne street	148 41
Eaton street	1,222 54
Fruit street	2,204 31
Haverhill street	1,490 54
Joy street	93 00
Lowell street	27 00
Mt. Vernon street	1,074 56
North Grove street	3,772 34
North Russell street	405 98
Stanford street	3,362 58
Street Improvements, Ward 9 :	
Acton street	982 60
Albion street	7 75
Bradford street	5,274 64
Canton street	17 93
Cobb street	4,084 07
Dedham street	24 24
Hamburg street	87 96
Laconia street	103 01
Mayo street	1,879 92
Meander street	77 23
Mystic street	140 84
Norwich street	50 91
Paul street	2,555 94
Pelham street	3,287 88
Taylor street	25 72
Upton street	1,102 86
Union Park street	7,882 83
Waterford street	2,439 63
Street Improvements, Ward 10 :	
Boylston street	1,152 16
Bryant street	1,660 13
Church street	2,793 72
Cortes street	2,141 09
Dartmouth street	33 00
Dundee street	4,466 05
Falmouth street	8,195 74
Fayette street	10 75
Ferdinand street	723 69
<i>Carried forward,</i>	\$675,340 84

<i>Brought forward,</i>	\$675,340 84
Isabella street	1,472 32
Knox street	280 52
Massachusetts avenue	6,125 73
Norway street	602 94
St. Botolph street	1,868 09
Yarmouth street	557 70
Street Improvements, Ward 11 :	
Arlington street	1,967 21
Audubon road	327 13
Beacon street	29,481 77
Berkeley street	34 00
Boylston street	1,344 85
Exeter street	393 23
Massachusetts avenue	636 92
Newbury street	448 50
Pinckney street	729 55
Street Improvements, Ward 12 :	
Camden street	3,229 08
Concord square	3,302 60
East Brookline street	161 65
East Lenox street	4,675 82
Fellows street	92 00
Greenwich park	2,069 45
Massachusetts avenue	5,563 11
Newland street	295 17
Reed street	397 66
Reed street	1,215 77
Sharon street	5,833 23
West Newton street	2,299 18
Street Improvements, Ward 13 :	
B street	133 40
Baxter street	2,164 89
Broadway	28,774 45
D street	122 80
Dorchester avenue	1,003 15
First street	64 11
Bridge Division	2,240 63
Sewer Division	445 34
Street Improvements, Ward 14 :	
Beckler avenue	468 01
Broadway, L to Q street	12,880 82
Broadway in front of Lincoln school	2,880 71
East Second street	208 00
East Seventh street	1,195 93
F street	7 63
Fifth street	580 90
First street	2,010 68
Fourth street	252 49

Carried forward,

\$806,179 96

<i>Brought forward,</i>	\$806,179 96
I street	9 50
Jay street.	574 88
L street, Broadway to Fourth	1,779 06
L street, Broadway to First	1,589 21
L street, Seventh to Eighth	361 29
M street	1,071 34
N street	497 99
Ninth street	1,757 06
O street	2,150 58
Third street	2,133 87
Sewer Division	247 87
Street Improvements, Ward 15 :	
Broadway	5,752 08
Covington street	5,045 41
East Fifth street	66 85
G street	90 55
Gates street	3,279 96
H street	431 54
K street	162 40
Mercer street	2,073 72
Middle street	409 84
Mitchell street	675 10
Newman street	1,271 02
Ninth street	7,457 52
Old Harbor street	56 00
Telegraph street	105 50
Thomas park	2,013 17
Vale street	335 43
Sewer Division	147 13
Street Improvements, Ward 16 :	
Alexander street	2,830 77
Andrew square	2,429 41
Blue Hill avenue	310 10
Boston street	2,016 20
Brookford street	679 23
Burnham street	1,149 44
Buttonwood street	1,598 98
Clapp street	131 51
Dacia street	166 19
Dean street	13 59
Dorchester avenue	419 60
Dove street	513 43
Folsom street	1,886 45
Humphreys street	551 67
Ingleside street	162 60
Judson street	935 40
Julian street	647 95
Leyland street	152 01
<i>Carried forward,</i>	\$864,320 36

<i>Brought forward,</i>	\$864,320 36
Locust street	306 28
Magnolia street	2,404 29
Massachusetts avenue	1,044 05
Monadnock street	1,040 01
Mt. Vernon street	1,281 31
Virginia street	279 90
Willow court	656 61
Woodward Park street	315 09
Sewer Division	382 66
Street Improvements, Ward 17 :	
Cottage street	3,231 31
Fellows street	5 00
Howard avenue	1,879 50
Hudson street	808 48
Hunneman street	401 25
Magazine street	4,520 06
Mall street	1,331 57
Marshfield street	156 00
Mt. Pleasant avenue	7,373 04
Pontine street	280 90
Shirley street	5,366 08
Washington street	69 00
Winslow street	1,681 04
Zeigler street	4,514 61
Street Improvements, Ward 18 :	
Ball street	2,501 32
Culvert street	317 64
Cunard street	2,069 99
Dudley street	1,473 73
Greenwich street	8 50
Linden Park street	1,185 84
Roxbury street	473 45
Ruggles street	3,966 80
Sarsfield street	2,049 54
Walpole street	1,239 72
Washington street	146 10
Westminster street	570 16
Weston street	1,244 79
Williams street	4,915 03
Sewer division	268 55
Street Improvements, Ward 19 :	
Autumn street	192 45
Bellevue street	1,387 47
Bromley street	777 18
Brookline avenue	158 62
Centre street	2,358 15
Conant street	2,355 30
Elmwood street	43 50

Carried forward,

\$933,352 23

<i>Brought forward,</i>	\$933,352 23
Faxon street	16 35
Greenwich street	6 25
Heath place	777 21
Highland street	15 00
Huntington avenue	330 00
King street	349 95
Lawn street	294 97
Linwood street	110 50
Longwood avenue	12,107 97
Marcella street	113 00
Minden street	2,948 28
Parker street	81 46
Smith street	668 54
Station street	1,923 86
Wait street	245 83
Walden street	37 00
Wigglesworth street	131 00
Sewer division	829 54
Street Improvements, Ward 20 :	
Auckland street	1,223 71
Barrington street	122 16
Blue Hill and Lawrence avenues	196 62
Bradlee street	575 23
Charles street	1,658 17
Cushing avenue	328 68
Dorchester avenue	499 96
Grampian Way	75 20
Greenwich street	3,086 79
Hancock street	218 45
Harvard street	3,637 84
Lyons street	841 37
Mayfield street	416 46
Northern avenue	18 85
Park street	276 60
Pleasant street	292 98
Quincy street	3,341 20
Savin Hill avenue	1,797 13
Shamrock street	1,573 24
Topliff street	307 20
Washington street	1,728 15
Westville street	198 50
Street Improvements, Ward 21 :	
Bainbridge street	347 00
Cheney street	30 87
Cliff street	3,564 73
Copeland street	39 25
Elm Hill avenue	3,843 00
Galena street	1,049 09
<i>Carried forward,</i>	\$985,627 37

<i>Brought forward,</i>	\$985,627 37
Gaston street	7 00
Georgia street	65 22
Glenwood street	1,687 24
Hamerton street	6 25
Holborn street	1,180 66
Humboldt avenue	926 26
Lansing street	22 80
Laurel street	1,204 51
Maple street	2,210 93
Mayfair street	953 67
Maywood street	5 00
Rockland street	52 65
Ruthven street	2,240 94
Schuyler street	72 85
Walnut avenue	1,620 68
Warren street	3,600 46
Washington street	142 45
Wayne street	34 98
Wenonah street	2,193 68
Winthrop street	54 95
Street Improvements, Ward 22 :	
Amory street	20 00
Arcadia street	889 60
Arklow street	332 48
Atherton street	9,067 70
Bickford street	131 75
Boylston street	1,597 27
Brookside avenue	879 56
Centre street	375 19
Creighton street	1,510 25
Day street	26 00
Forbes street	479 53
Heath street	294 51
Paul Gore street	24 00
Ritchie street	1,118 40
School street	3,844 30
Washington street	258 56
Sewer Division	591 28
Street Improvements, Ward 23 :	
Ashley street	244 63
Baker street	2,340 86
Beech street	2,283 50
Boylston street	499 76
Burnett street	1,251 41
Call street	1,559 34
Centre street	2,736 87
Corey street	428 42
Cornwall street	321 20
<i>Carried forward,</i>	\$1,037,016 92

<i>Brought forward,</i>	\$1,037,016 92
Green street	1,446 93
Keyes street	2,245 80
Montview street	96 00
Mt. Vernon street	22 25
Perkins street	673 85
Pond street	210 09
South street	1,374 18
Spring street	3,354 13
Tappan street	1,779 88
Varney street	44 50
Walk Hill street	583 11
Washington street	904 39
Weld Hill street	815 92
Williams street	713 70
Street Improvements, Ward 24 :	
Ashmont street	1,102 31
Blue Hill avenue	147 07
Butler street	358 47
Centre street	1,442 26
Corbett street	30 75
Dix street	268 62
Euclid street	481 20
Evans street	253 96
Marsh street	54 76
Medway street	612 54
Milton avenue	1,370 19
Morton street	1,002 12
Neponset avenue	172 31
Norfolk street	5,362 46
Richmond street	615 60
Sanford street	2,001 38
Talbot avenue	5,710 58
Tenean street	11,417 88
Street Improvements, Ward 25 :	
Aldie street	1,367 53
Bayard street	1,083 45
Cambridge street and Warren street	2,339 46
Chestnut Hill avenue	2,550 55
Foster street	1,078 33
Harvard avenue	9 00
Leicester street	2,185 32
Lincoln street	8,520 36
Linden street	5,182 21
Menlo street	98 86
Myrick street	380 84
North Beacon street	3,835 97
North Harvard street	482 75
Parsons street	28 67

Carried forward, \$1,112,829 41

<i>Brought forward,</i>	\$1,112,829 41
Portsmouth street	852 80
Riverdale street	412 20
Surrey street	3,021 83
Washington street	4,813 71
Waverly street	551 44
Bridge Division	485 00
Sewer Division	82 76
Sewer appropriations:	
Sewer Division	666 66
Laying out and construction of highways, sewer construction	285 15
Canal street relief sewer	48 60
Stony Brook improvement	115 29
	\$1,124,164 85
Less amount paid out of appropriation for Paving Division	53,245 24
	\$1,070,919 61

BLUE HILL AND OTHER AVENUES.

Blue Hill avenue:

Labor, including engineering and inspection	\$5,064 81
Teaming	2,950 00
Gravel	97 24
Stone	11,228 71
Blocks	9,349 05
Edgestone and corners	955 16
Flagging	549 67
Wharfage and rent	454 20
Fuel	15 06
Lumber	100 83
Trees	138 75
Relocating building	500 00
Sprinkling	380 00
Advertising	35 00
Sundries	537 12
Amount paid to Doherty & Connors, construction work	19,880 27
Amount paid to H. P. Nawn, construction work	19,498 67
Amount paid to Metropolitan Construction Company, building retaining-wall	8,517 88
Amount paid to D. E. Lynch, paving	3,024 30
Amount paid to Davern & Cronin, construction work	802 15
Amount paid to H. F. C. Holbrook	500 00

Carried forward, \$84,578 87

¹ Includes \$926.36 paid by West End Street Railway Company for loan. Includes draft of \$800 shown in last year's cost, but paid in 1897.

<i>Brought forward,</i>	\$84,578 87
Amount paid out of Blue Hill and other avenues	\$46,774 70
Amount paid out of Laying-out and Construction of Highways	37,804 17
	\$84,578 87

Columbus avenue.

Labor, including engineering and inspection	\$11,981 89
Teaming	8,380 50
Gravel and sand	1,046 50
Stone	12,059 93
Steam-roller	260 00
Bricks	895 75
Blocks	1,078 55
Edgestone	263 47
Fuel	1 74
Lumber	42 36
Artificial stone sidewalks	136 62
Advertising	51 25
Sundries	36 05
Amount paid to Boston Asphalt Company, asphaltting	4,160 10
Amount paid to Barber Asphalt Paving Company, ...	1,513 52
Amount paid to D. E. Lynch, construction work, ...	3,853 38
Amount paid to Collins & Ham, construction work, ...	1,224 81
Amount paid to Barnes, Ruffin Company, construction work	1,219 63
Amount paid to P. F. Donovan, construction work, ...	726 00
Amount paid to Philip Doherty, construction work	570 19
Amount paid to Austin Ford & Son	391 07
	\$49,893 31

Amount paid out of Blue Hill and other avenues	\$12,026 16
Amount paid out of Laying-out and Construction of Highways	37,867 15
	\$49,893 31

Commonwealth avenue.

Labor, including engineering and inspection	\$646 65
Teaming	592 50
Stone	278 85
Amount paid to Neill McBride, construction work, ...	6,577 44
Amount paid to J. A. Whittemore's Sons, construction work	2,792 13

Carried forward, ¹ \$10,887 57

¹ Includes \$1,088.25 paid by West End Street Railway Company for loam. Includes \$4,051.99 shown in last year's cost, but paid in 1897.

<i>Brought forward,</i>	\$10,887 57
Amount paid out of Blue Hill and other avenues	\$9,803 77
Amount paid out of Laying-out and Construction of Highways	1,083 80
	\$10,887 57

Huntington avenue.

Labor, including engineering and inspection	\$233 85
Teaming	2,121 50
Stone	7,216 01
Blocks	2,332 12
Bricks	390 00
Lumber	232 71
Paving	34 73
Steam-roller	13 00
Sundries	25 00
Amount paid to Boston Asphalt Co., asphaltting	2,382 53
Amount paid to H. Gore & Co., construction work	1,307 93
Amount paid to Doherty & Connors, construction work	1,277 33
Amount paid to J. B. O'Rourke & Co., construction work	919 19
	¹ \$18,485 90

Amount paid out of Blue Hill and other avenues	\$12,494 11
Amount paid out of Laying-out and Construction of Highways	5,991 79
	\$18,485 90

**SUMMARY OF EXPENDITURES FOR BLUE
HILL AND OTHER AVENUES.**

Blue Hill avenue	\$84,578 87
Columbus avenue	49,893 31
Commonwealth avenue	10,887 57
Huntington avenue	18,485 90
	² \$163,845 65
Less amount paid out of appropriation for Laying- out and Construction of Highways	82,746 91
	\$81,098 74

¹ Includes \$274.24 paid by West End Street Railway Company for loam. Includes \$919.19 shown in last year's cost, but paid in 1897.

² Includes \$5,771.18 shown in last year's cost, but paid in 1897.

LAYING OUT AND CONSTRUCTION OF HIGHWAYS.

Abbotsford street , between Walnut avenue and Harold street.	
Labor	\$12 25
Artificial stone sidewalk	45 66
Amount retained from Quimby & Ferguson, for work done under contract in 1896	93 20
	<u>\$151 11</u>
Athelwold street , between School and Kilton streets.	
Labor	\$316 13
Teaming	12 94
Blocks	839 58
Stone	1,488 22
Flagging	4 04
Edgestone	1,198 15
Wharfage	25 00
Artificial stone sidewalks	212 70
Advertising	26 60
Amount paid to Collins & Ham, construction work	2,936 43
	<u>\$7,059 79</u>
Audubon road , Beacon street, across Ivy street.	
Amount retained from William Scollans, for work done in 1896 under contract	\$290 69
Bay State road.	
Labor	\$2 50
Bearse street.	
Labor	\$5 50
Belmore terrace.	
Labor	\$19 75
Belvidere street.	
Labor	\$42 25
Stone	113 42
	<u>\$155 67</u>
Bernard street.	
Labor	\$42 25
Advertising	72 75
	<u>\$115 00</u>

Bloomfield street, between Geneva avenue and Greenbrier street.

Labor	\$167 74
Stone	1,999 44
Blocks	1,330 92
Bricks	258 50
Advertising	35 10
Amount paid to Collins & Ham, construction work .	1,669 10

\$5,460 80
Boylston street, between Boylston road and Brookline avenue.

Labor	\$987 85
Teaming	442 00
Stand-posts	52 46
Stone	4,292 94
Fuel	4 38
Printing	12 23
Amount paid to Neill McBride, construction work .	8,588 00

\$14,379 86
Brighton avenue, Commonwealth avenue to Cambridge street.

Amount retained from Doherty & Connors, for work done under contract in 1896	\$1,806 19
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Bryant street.

Labor	\$4 00
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Burt street.

Labor	\$13 75
Advertising	5 00

\$18 75
Chamberlain street, between Harvard and Algonquin streets.

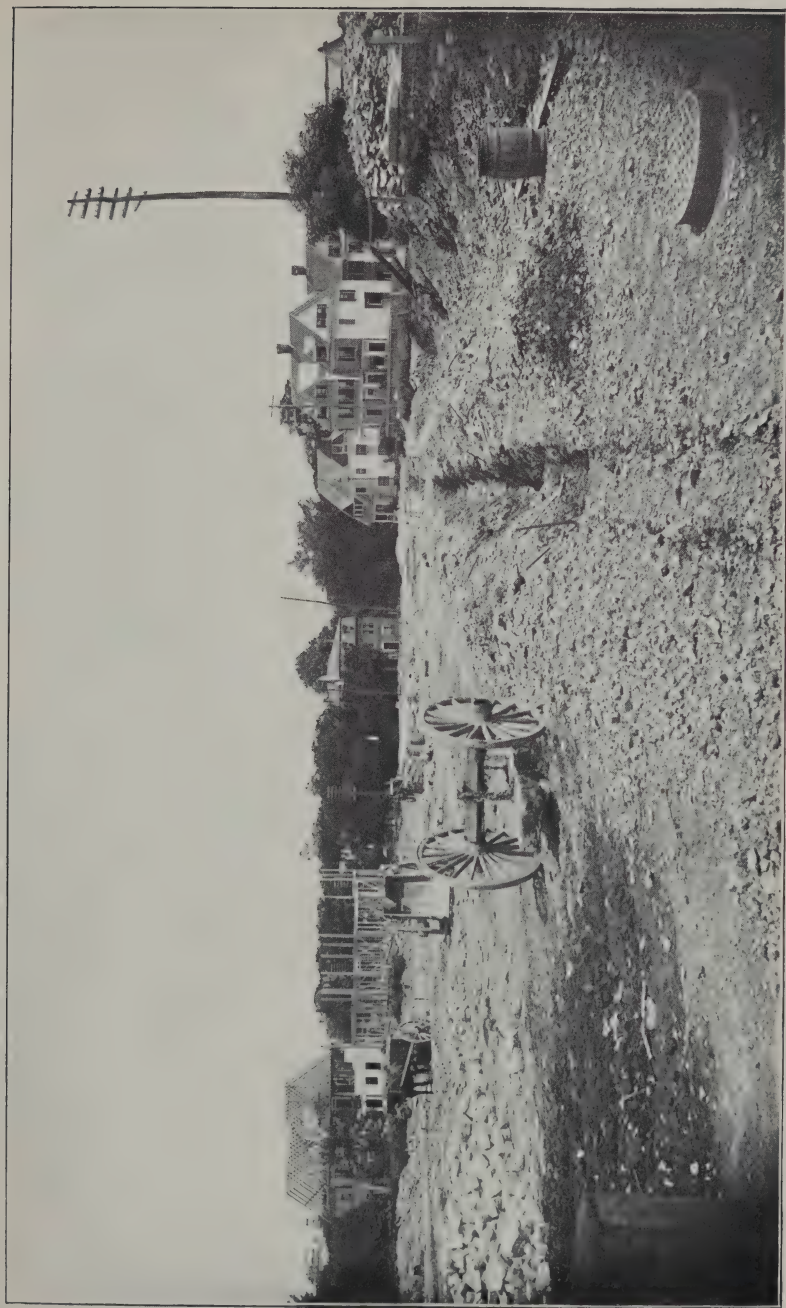
Labor	\$176 88
Stone	627 10
Edgestone	597 47
Blocks	244 90
Wharfage	25 00
Paving	9 18
Advertising	28 96
Amount paid to Collins & Ham, construction work .	1,327 43

\$3,036 92
Chamblet street.

Labor	\$10 75
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Clinton street.

Teaming	\$18 00
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COLUMBIA ROAD, NEAR BLUE HILL AVENUE, UNDER CONSTRUCTION.

Columbia road.

Labor, including engineering and inspection	\$8,496 09
Printing	46 96
Rent	36 00
Teaming	14 75
Advertising	58 87
Fuel	2 71
Sundries	112 30
Amount paid to H. P. Nawn, construction work	10,367 28
	\$19,134 96

Elizabeth street.

Labor	\$17 25
Advertising	5 00
	\$22 25

Ellet street, Adams street to Dorchester avenue.

Labor	\$155 74
Stone	604 76
Blocks	414 13
Edgestone	607 43
Advertising	32 07
Amount paid to H. Gore & Co., construction work, ...	1,082 25
	\$2,896 38

Engineering expenses.	\$239 82
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Fairmount street.

Labor	\$782 45
Gravel	1,010 62
Stone	792 34
Fuel	1 36
Advertising	24 25
	\$2,611 02

Fenelon street, between Washington and Merrill streets.

Labor	\$76 25
Teaming	3 84
Stone	88 64
Artificial stone sidewalk	13 14
	\$181 87

Fullerton street, between Brookline avenue and Fairhaven street.

Labor	\$298 50
Stone	850 47

Carried forward, \$1,148 97

<i>Brought forward,</i>	\$1,148 97
Edgestone	596 59
Blocks	410 80
Advertising	33 07
Amount paid to Philip Doherty, construction work .	2,217 05
	<u>\$4,406 48</u>

Gaylord street, between Washington and Chamberlain streets.	
Labor	\$140 87
Stone	504 61
Edgestone	533 58
Blocks	372 56
Paving	9 90
Advertising	36 31
Amount paid to Doherty & Connors, construction work .	894 91
	<u>\$2,492 74</u>

Geneva avenue, between Westville street and Dorchester avenue.	
Labor	\$818 57
Teaming	652 00
Blocks	1,136 81
Edgestone	1,918 17
Stone	3,215 79
Printing	6 12
Amount paid to Finneran & O'Hearn, construction work .	5,392 43
	<u>\$13,139 89</u>

Granby street, between Commonwealth avenue and Charles river.

Amount retained from Quimby & Ferguson, for work done under contract in 1896	¹ \$120 00
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Greenbrier street, between Bowdoin and Bloomfield streets.	
Amount retained from Quimby & Ferguson for work done under contract in 1896	² \$130 00

Greenbrier street, between Bloomfield and Park streets.	
Labor	\$265 62
Stone	1,234 25
Edgestone	1,305 91

<i>Carried forward,</i>	\$2,805 78
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¹Included in cost for 1896 but paid in 1897.

²Included in cost for 1896 but paid in 1897.

<i>Brought forward,</i>	\$2,805 78
Blocks	429 72
Advertising	28 10
Amount paid to H. Gore & Co., construction work,	2,041 77
	\$5,305 37

Harvard street.

Excavating	\$40 00

Ipswich street, between Boylston road and Boylston street.

Labor	\$847 76
Advertising	6 00
Sundries	9 05
Amount paid to Boston & Albany Railroad Com- pany, filling	15,337 23
Amount paid to Holbrook, Cabot & Daly, retaining- wall	4,922 86
	\$21,122 90

Lauriat avenue, between Blue Hill avenue and Tucker street.

Labor	\$335 75
Teaming	72 50
Edgestone	547 70
Blocks	246 88
Stone	1,175 96
Artificial stone sidewalks	84 00
Printing	6 11
Amount paid to Doherty & Connors, construction work	5,150 91
	\$7,619 81

Leroy street.

Labor	\$25 50
Advertising	5 00
	\$30 50

Malvern street.

Labor	\$4 00
Advertising	5 00
	\$9 00

Medway street.

Labor	\$9 00

Morse street, between Washington street and Bowdoin avenue.

Labor	.	.	.	.	.	.	.	\$40	25
Teaming	.	.	.	.	.	.	.	41	00
Stone	.	.	.	.	.	.	.	17	15
								\$98	40

Norway street, between Massachusetts avenue and Parker street.

Labor	.	.	.	.	.	.	\$532 38
Teaming	.	.	.	.	.	.	20 00
Stone	.	.	.	.	.	.	835 54
Edgestone	.	.	.	.	.	.	807 14
Gravel	.	.	.	.	.	.	68 40
Blocks	.	.	.	.	.	.	425 09
Filling	.	.	.	.	.	.	174 00
Advertising	.	.	.	.	.	.	30 81
Amount paid to Doherty & Connors, construction work	.	.	.	.	.	.	3,160 70
							\$6,054 06

Peterborough street, between Audubon road and Fairhaven street.

Labor	\$1,668 01
Teaming	252 00
Sundries	5 07
Amount paid to Boston & Albany Railroad Com- pany, filling	23,957 25
	\$25,882 33

Peverell street.

Labor	.	.	.	.	.	.	.	\$241	42
Teaming	.	.	.	.	.	.	.	202	50
Advertising	.	.	.	.	.	.	.	25	20
								\$469	12

Queensberry street, between Audubon road and Fairhaven street.

Labor	\$901 26
Sundries	17 06
Amount paid to Boston & Albany Railroad Com- pany, filling	17,110 68
	\$18,029 00

Rosseter street.

Advertising	\$5 00
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Ruggles street, between Parker street and Back Bay Fens.

Labor	\$200 25
Edgestone	32 61
Advertising	29 06
Amount paid to Doherty & Connors, construction work	740 42
	\$1,002 34

St. Alphonsus street, between Tremont and Calumet streets.

Gravel	\$216 00
Amount retained from Quimby & Ferguson, for work done under contract in 1896	130 00
	¹ \$346 00

St. Stephen street.

Labor	\$632 22
Amount paid to D. H. Sullivan, filling	534 95
	\$1,167 17

Tonawanda street, between Geneva avenue and Greenbrier street.

Labor	\$420 88
Edgestone	189 69
Stone	653 42
Blocks	265 66
Advertising	33 25
Sundries	1 36
Amount paid to Philip Doherty, construction work, ...	573 33
	\$2,137 59

Turner street, between Haviland and Astor streets.

Labor	\$204 88
Teaming	174 00
Bricks	443 10
Blocks	485 07
Edgestone	782 97
Stone	520 03
Advertising	31 05
Filling	164 40
Amount paid to Doherty & Connors, construction work	3,528 52
	\$6,334 02

¹ Includes \$130, shown in last year's cost, but paid in 1897.

Vancouver street, between Huntington avenue and Ruggles street.

Labor	\$94 25
Advertising	31 56
Edgestone	20 37
Amount paid to Doherty & Connors, construction work	425 42
	<u>\$571 60</u>

Vose street.

Labor	<u>\$5 50</u>
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Waterlow street.

Advertising	<u>\$5 00</u>
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Wilder street, between Washington street and Geneva avenue.

Labor	\$68 50
Stone	20 57
Teaming	2 98
Amount paid to Finneran & O'Hearn, construction work	249 77
	<u>\$341 82</u>

Wolcott street, between Columbia road and Erie street.

Labor	\$159 00
Stone	978 50
Blocks	551 02
Edgestone	728 98
Wharfage	25 00
Advertising	35 56
Amount paid to Collins & Ham, construction work, ...	1,403 25
	<u>\$3,881 31</u>

SUMMARY OF EXPENDITURES.

LAYING-OUT AND CONSTRUCTION OF HIGHWAYS.

TOTAL AMOUNT EXPENDED.

Blue Hill avenue	\$37,804 17
Columbus avenue	37,867 15
Commonwealth avenue	1,083 80
Huntington avenue	5,991 79
Abbotsford street	151 11
Athelwold street	7,059 79
Audubon road	290 69
Bay State road	2 50
<i>Carried forward,</i>	<u>\$90,251 00</u>

<i>Brought forward,</i>	\$90,251 00
Bearse street	5 50
Belmont terrace	19 75
Belvidere street	155 67
Bernard street	115 00
Bloomfield street	5,460 80
Boylston street	14,379 86
Brighton avenue	1,806 19
Bryant street	4 00
Burt street	18 75
Chamberlain street	3,036 92
Chamblet street	10 75
Clinton street	18 00
Columbia road	19,134 96
Elizabeth street	22 25
Ellet street	2,896 38
Engineering expenses	239 82
Fairmount street	2,611 02
Fenelon street	181 87
Fullerton street	4,406 48
Gaylord street	2,492 74
Geneva avenue	13,139 89
Granby street	120 00
Greenbrier street	130 00
Greenbrier street	5,305 37
Harvard street	40 00
Ipswich street	21,122 90
Lauriat avenue	7,619 81
Leroy street	30 50
Malvern street	9 00
Medway street	9 00
Morse street	98 40
Norway street	6,054 06
Peterborough street	25,882 33
Peverell street	469 12
Queensberry street	18,029 00
Rosseter street	5 00
Ruggles street	1,002 34
St. Alphonsus street	346 00
St. Stephen street	1,167 17
Tonawanda street	2,137 59
Turner street	6,334 02
Vancouver street	571 60
Vose street	5 50
Waterlow street	5 00
Wilder street	341 82
Wolcott street	3,881 31
	¹ \$261,124 44

¹ Includes \$82,746.91 for Blue Hill and other avenues. Includes \$380 shown in last year's cost, but paid in 1897.

NEW EDGESTONE.

The following tables show the amount of new edgestone set during the year :

CITY PROPER.

*Wards 6, 7, 8, 9, 10, 11, 12, 17 and 18, in whole or in part.
(Paving Districts Nos. 8, 9 and 10.)*

	Lin. ft.
Dundee street	171
East Lenox street	513
Fullerton street	946
Norway street and Falmouth street	98
Norway street	1,231
St. Botolph street, Follen and Blackwood streets	523
Turner street	1,432
Sundry streets in small quantities	183
	5,097

ROXBURY.

*Wards 16, 17, 18, 19, 21 and 22, in whole or in part.
(Paving District No. 7.)*

	Lin. ft.
Calumet street	125
Columbus avenue	7,598
Forbes street	860
Fellows and Hunneman streets	521
Galena street	876
Georgia street	100
Homestead street	116
Humboldt avenue	375
Ingleside street	312
Lansing street	142
Munroe street	108
Round Hill street	144
Ruthven and Harold streets	502
Shirley street	1,197
Savin street	110
Southwood street	106
Tremont street	205
Sundry streets in small quantities	844
	14,241

SOUTH BOSTON.

Wards 13, 14, 15 and 16, in whole or in part. (Paving District No. 1.)

	Lin. ft.
East Third and L streets	142
East Second street	304
East Seventh and M streets	140
East Ninth street	333
East Eighth street	285
Jay street	490
O street	260
Sundry streets in small quantities	357
	<u>2,311</u>

EAST BOSTON.

Wards 1 and 2. (Paving District No. 2.)

	Lin. ft.
Condor street	560
Maverick street	559
Putnam and Bremen streets	139
Saratoga street	100
Sundry streets in small quantities	333
	<u>1,691</u>

DORCHESTER.

Wards 16, 20 and 24, in whole or in part. (Paving District No. 6.)

	Lin. ft.
Arcadia and Montello streets	170
Ashmont street	547
Athelwold street	1,679
Barrington street	346
Belfort street	364
Bloomfield street	627
Blue Hill avenue and Stanwood street	712
Blue Hill avenue boulevard	3,865
Brookford and Rand streets	647
Centre street	728
Chamberlain street	1,012
Cunningham street	100
Cushing avenue and Jerome street	965
Dalmatia, Dewey, Danube and Dacia streets	309
Edwin street	115
Ellet street	952

Carried forward, 13,138

	Lin. ft.
<i>Brought forward,</i>	13,138
Gaylord street	937
Geneva avenue	2,524
Greenbrier street	4,700
Lauriat avenue	6,227
Milton avenue	1,309
McLellan street	120
Norfolk street	100
Norton street	159
Park street	359
Quincy street	607
River and Oakdale streets	234
Rosedale street	417
Sagamore street	135
Tonawanda street	1,649
Tucker street	1,427
Washington street	195
Westville and Draper streets	491
Wolcott street	1,373
Sundry streets in small quantities	1,104
	37,205

WEST ROXBURY.

Wards 22 and 23, in whole or in part. (Paving District No. 5.)

	Lin. ft.
Amory street	698
Ashley street	524
Blue Hill avenue	1,358
Hyde Park avenue	240
Lamartine street	1,522
Tappan street	745
Sundry streets in small quantities	141
	5,228

BRIGHTON.

Ward 25. (Paving District No. 4.)

	Lin. ft.
Cambridge and Warren streets	629
Linden street	165
Washington street	218
Sundry streets in small quantities	74
	1,086

RECAPITULATION.

	Lin. ft.
City Proper	5,097
Roxbury	14,241
South Boston	2,311
East Boston	1,691
Dorchester	37,205
West Roxbury	5,228
Brighton	1,086
	66,859

Edgestones.

New Edgestones. (First setting.) Lin. Ft.

YEAR.	City Proper.	Roxbury.	South Boston.	East Boston.	Dorchester.	West Roxbury.	Brighton.	Charlestown.	Back Bay.	Total.
1891.....	8,236	22,693	11,724	4,131	18,138	4,617	2,032	2,227	.....	73,798
1892.....	9,222	25,506	9,631	11,238	36,859	9,970	9,001	2,804	.....	114,231
1893.....	1,118	14,979	4,372	1,969	10,587	4,795	3,981	.....	.....	41,804
1894.....	1,916	39,324	521	816	6,544	1,568	1,323	694	.....	52,706
1895.....	2,990	17,053	2,097	1,146	15,205	8,319	4,191	668	.....	51,669
1896.....	1,697	20,111	3,855	807	21,367	2,498	8,507	791	41,917	101,550
1897.....	5,097	14,241	2,311	1,691	37,205	5,228	1,086	.....	.....	66,859
Totals	30,276	153,907	34,514	21,798	145,905	36,995	30,121	7,184	41,917	502,617

NEW BRICK SIDEWALKS.

The following tables show the number of square yards of brick sidewalks laid during the year :

CITY PROPER.

*Wards 6, 7, 8, 9, 10, 11, 12, 17 and 18, in whole or in part.
(Paving Districts Nos. 8 and 10.)*

	Sq. Yds.
Appleton street	3,094
Boylston street	1,801
Camden street	510
Church street	404
Concord square	908
<i>Carried forward,</i>	6,717

	Sq. Yds.
<i>Brought forward,</i>	6,717
Cortes street	843
Dartmouth street	223
Dix place	208
Dundee street	1,034
Eaton street	205
Falmouth street	1,088
Fruit street	371
Huntington avenue	151
Isabella street	1,068
Massachusetts avenue	2,319
Myrtle street	328
Newbury street	146
Norway street	213
North Grove street	577
Paul street	346
Pelham street	351
Unity street	221
West Newton street	802
Sundry streets in small quantities	76
	17,287

ROXBURY.

*Wards 16, 17, 18, 19, 21 and 22, in whole or in part.
(Paving District No. 7.)*

	Sq. Yds.
Arcadia street	496
Atherton and Amory streets	920
Ball street	702
Cabot street	388
Cedar street	547
Cliff street	224
Culvert street	93
Cunard street	116
Dewey street	216
Galena street	353
Glenwood street	430
Heath street	110
Humboldt avenue	224
Longwood avenue	210
Magazine street	688
Maple street	790
Marcella street	171
Massachusetts avenue	2,045
Mount Pleasant avenue	1,881
Pontine street	107
Riverside street	215

Carried forward,

10,926

	Sq. Yds.
<i>Brought forward,</i>	10,926
Ruggles street	719
Sarsfield street	428
Savin street	328
Schuyler street	173
Station street	497
Tremont street	1,588
Walpole street	281
Warren street	1,438
Washington street	148
Wenonah street	882
Westminster street	160
Weston street	365
Williams street	1,118
Sundry streets in small quantities	2,545
	21,596

SOUTH BOSTON.

Wards 13, 14, 15 and 16, in whole or in part. (Paving District No. 1.)

	Sq. Yds.
B street	444
Baxter street	1,419
Beckler avenue	345
East Broadway	4,628
East Second street	425
East Seventh street	575
East Third street	1,153
Gates street	1,616
K street	428
M street	474
Mercer street	530
Mitchell street	160
N street	509
Sundry streets in small quantities	754
	13,460

EAST BOSTON.

Wards 1 and 2. (Paving District No. 2.)

	Sq. Yds.
Border street	7,744
Central square	166
Condor street	716
<i>Carried forward,</i>	8,626

	Sq. Yds.
<i>Brought forward,</i>	8,626
Everett street	3,096
London street	1,074
Maverick street	147
Marginal street	203
Meridian street	175
Moore street	171
Orleans street	215
Porter street	1,620
Prescott street	135
Saratoga street	278
Sundry streets in small quantities	385
	16,125

DORCHESTER.

Wards 16, 20 and 24, in whole or in part. (Paving District No. 6.)

	Sq. Yds.
Alexander street	898
Ashmont street	156
Belfort street	216
Carruth street	178
Dorchester avenue	106
East street	170
Hartland and Sydney streets	762
Milton avenue	157
Stoughton street	124
Sundry streets in small quantities	228
	2,995

WEST ROXBURY.

Wards 22 and 23, in whole or in part. (Paving District No. 5.)

	Sq. Yds.
Centre street	982
Conway street	157
Grove street	114
Hyde Park avenue	122
Mount Vernon street	264
Sundry streets in small quantities	216
	1,855

CHARLESTOWN.

Wards 3, 4 and 5. (Paving District No. 3.)

	Sq. Yds.
Adams street	855
Alford street	394
<i>Carried forward,</i>	1,249

	Sq. Yds.
<i>Brought forward,</i>	1,249
Arlington avenue	108
Auburn street	830
Baldwin street	1,296
City square	530
Common street	905
Concord street	684
Decatur street	636
Devens street	309
Dorrance street	611
Everett street	3,096
Lexington street	1,674
Maverick street	72
Mead street	700
Monument street	647
Vine, Tufts, Moulton and Corey streets	820
Sundry streets in small quantities	287
	14,454

BRIGHTON.

Ward 25. (Paving District No. 4.)

	Sq. Yds.
Beacon street	837
Cambridge street	396
Foster street	217
Warren street	288
Western avenue	255
Sundry streets in small quantities	135
	2,128

RECAPITULATION.

	Sq. Yds.
City proper	17,287
Roxbury	21,596
South Boston	13,460
East Boston	16,125
Dorchester	2,995
West Roxbury	1,855
Charlestown	14,454
Brighton	2,128
	89,900

New Brick Sidewalks.*First laying. Square yards.*

YEAR.	City Proper.	Roxbury.	South Boston.	East Boston.	Dorchester.	West Roxbury.	Brighton.	Charlestown.	Back Bay.	Total.
1891.....	3,881	9,098	3,628	2,176	1,478	967	377	120	.....	21,725
1892.....	10,423	20,231	4,484	12,847	10,462	2,905	1,068	3,451	.....	65,871
1893.....	964	5,912	751	2,197	2,412	350	.....	175	.....	12,761
1894.....	1,537	11,533	2,706	2,115	453	834	.....	437	.....	19,615
1895.....	4,103	6,246	1,946	1,151	2,146	1,734	2,908	408	.....	20,632
1896.....	1,044	15,897	2,314	381	2,616	542	.....	288	5,073	28,155
1897.....	17,287	21,596	13,460	16,125	2,995	1,855	2,128	14,454	.....	89,900
Totals	39,239	90,513	29,279	36,992	22,562	9,187	6,481	19,333	5,073	258,659

**PROPERTY IN CHARGE OF THE DEPUTY
SUPERINTENDENT OF PAVING DIVISION.**

Buildings and wharf on Albany street, opposite Sharon street. The building is of brick and wood, and covers some 8,000 square feet of land, and is divided into a shed for storage, blacksmith's and carpenter's shops, tool-room and stable. The total contents of the lot, including wharf and building, are 63,180 square feet.

Fort Hill wharf, containing 21,054 square feet, placed in charge of the Paving Department May 18, 1874, to be used for the landing and storage of paving-blocks and gravel until such time as said wharf shall be wanted for the extension of Oliver street. The greater part of said wharf is occupied by the Sanitary Division as a garbage-dump, and the building thereon is leased to a tenant.

Lot on Chelsea, Marion and Paris streets, East Boston, containing 43,550 square feet. Part of this lot used by the Sewer Division.

Ledge lot on Washington street, corner Dimock street, Roxbury, containing 134,671 square feet. Upon this lot are buildings containing a steam-engine and stone-crusher.

Highland-street stable lot. Upon this lot is a large brick stable, erected in 1873, and occupied by the Sanitary and Paving Divisions; also a brick building used as a blacksmith's shop, and a shed for the storage of tools, etc.

Ledge lot on Codman street, Dorchester, containing 299,000 square feet, was purchased in 1870. Upon this lot is a shed

containing a steam-engine and stone-crusher; also a stable and tool-house.

On the Almshouse lot, Hancock street, Dorchester, there are two stables; also a shed and tool-house.

Ledge lot on Magnolia street and Bird place, Dorchester, containing 81,068 square feet. This lot was purchased by the town of Dorchester in 1867.

Downer-avenue lot, Dorchester, containing 35,300 square feet.

On Child street, West Roxbury, a lot of land containing 43,024 square feet, upon which are a stable and shed, blacksmith's shop, and tool-house.

Gravel lot in the town of Milton, on Brush Hill road, containing 64,523 square feet, hired by the town of Dorchester for nine hundred and ninety-nine years.

Gravel lot on Morton street, Ward 23, containing about one-third of an acre, purchased by the town of West Roxbury in 1870, used for storage purposes.

Ledge and gravel lot, rear of Union street, containing about 37,000 square feet, purchased by the town of Brighton. This lot is at present leased.

Ledge lot on Chestnut Hill avenue, Brighton, containing about thirteen acres, upon which are an office, engine-house, stable and crusher plant.

On Medford street, Charlestown, a wharf lot, foot of Elm street, containing 8,000 feet, upon which are sheds, office, stable, etc.

In South Boston, corner of H and Ninth streets, stable, carriage-house, shed, tool-house and office on leased land.

On Hereford street, a yard with shed, tool-house and office.

Wharf, known as Atkin's wharf, 521 Commercial street, purchased in 1887 for \$24,000, containing 22,553 square feet, having on it an office and stable.

On Centre street, West Roxbury, buildings containing engines, stone-crushers, tools, etc., on leased land.

On Rosseter street, Dorchester, buildings containing engines, stone-crushers, tools, etc., on leased land.

On Heath street, Roxbury, buildings containing engines, stone-crushers, tools, etc., on leased land.

On Revere street, wharf for storing paving-blocks, etc.

Wharf on Chelsea street, East Boston, containing 61,000 square feet, with buildings purchased in 1897 for \$15,000.

Streets Laid Out or Extended.

DATE.	Street.	Location.	Length, Lin. ft.
Jan. 25,	Astor st.	From Massachusetts ave. to Parker st.	872.16
Aug. 31,	Beacham st. ...	To Main st.	162.42
Sept. 23,	Belmore terrace.....	From Boylston st. to Boylston terrace	272.00
Sept. 10,	Belvidere st. ...	From Dalton st. to W. Newton st.	458.39
April 27,	Bayard st.	From North Harvard st. to Kenneth st.	627.83
June 21,	Burt st.	(Formerly Burt ave.) from Ashmont st. to Washington st.	1,372.00
July 8,	Bloomfield st.	From Geneva ave. to Greenbrier st.	1,554.00
June 1,	Bushnell st. ...	From Beale st. to Weyanoke st. and over private way known as Randolph terrace.....	479.28
Aug. 31,	Bernard st.	From Harvard st. to Talbot ave..	1,406.00
Nov. 22,	Bentley st.	From Henshaw st. to Sparhawk st.	506.40
Dec. 11,	Braemore road	(Formerly Berwick road) from Commonwealth ave. to Chiswick road	425.00
Dec. 17,	Brooks st.	From Houghton st. to North Beacon st.	692.00
Dec. 18,	Barrington st.	From Bowdoin st. to Homes ave.	945.41
May 13,	Covington st. .	(Formerly Atlantic st.) from Thomas pk. to East Eighth st.	265.49
Nov. 5,	Chamblet st. ...	From Magnolia st. to Hartford st.	445.55
July 22,	Charlesview st.	(Formerly Bigelow st.) from another part of said Bigelow st. to Newton st.	363.00
Aug. 31,	Columbia road	From Franklin Park to Marine Park, Dorchester and South Boston	8,635 00
Nov. 11,	Carlos st.	From Lauriat ave. to Chapman ave.	300.00
Dec. 11,	Colliston road	(Formerly Windsor road) Kilsyth road to Lanark road	350.00
April 8,	Dorchester av.	Over and including Federal-st. bridge and to Summer st., extended	1,970.00
Oct. 8,	Dromey st.	From Judson st. to Brookford st.	213.00
Jan. 27,	Elmira st.	From George st. to Market st. ...	1,040.31
April 14,	Fairmount st.	From Washington st. to Morton st.	2,660.99
July 8,	Greenbrier st.	From Bloomfield st. to Park st. .	845.69
Oct. 19,	Hardwick st. .	(Formerly High st.) from Bigelow st. to Dunboy st.	725.54
Dec. 18,	Harold st.	From Munroe st. to Walnut ave..	758.04
Oct. 6,	Ipswich st.	From Boylston st. across Back Bay Fens to Boylston st.	2,361.22
Oct. 28,	Idaho st.	From River st.	852.70
Oct. 1,	Jay st.	From East Fourth st. to East Fifth st.	250.14
Dec. 11,	Kilsyth road. .	From Lanark road to the Brookline boundary line	1,360.00
Carried forward			33,169.56

Streets Laid Out or Extended.—*Concluded.*

DATE.	Street.	Location.	Length, Lin. ft.
		<i>Brought forward</i>	33,169.56
Dec. 11,	Kinross road..	From Commonwealth ave. to Sutherland road.....	570.00
Aug. 19,	Leroy st.....	From Geneva ave. to Ditson st..	719.00
Jan. 13,	Locust st.....	From Dorchester ave. to Buttonwood st.....	240.00
Nov. 17,	Leedsville st..	(Formerly Leeds st.) from Dorchester ave. to Adams st.....	572.00
Nov. 19,	Lonsdale st...	From Dorchester ave. to Adams st.	1,626.00
Dec. 11,	Lothian road..	(Formerly Fenwick road) from Strathmore road to Chiswick road.....	345.00
Dec. 11,	Lanark road..	From Kinross road to Brookline boundary line	1,388.80
Dec. 16,	Maryland st...	(Formerly Leeds st.) from Savin Hill ave. to Bay st.	478.72
Feb. 1,	Marginal st...	South-east from Jeffries st.	467.00
July 30,	Myrick st.....	From Franklin st. to beyond Bayard st.....	299.15
Aug. 6,	Malvern st....	From Brighton ave. to Ashford st.	702.29
Nov. 19,	Newton st....	From present termination of street as a private way to Charlesview st.....	270.79
Nov. 23,	Nightingale st.	From Talbot ave. to Bernard st..	1,461.97
Oct. 26,	Oakley st.....	From Bowdoin st. to Geneva ave.	823.00
Jan. 22,	Page st.....	From McLellan st. to Glenway st.	390.67
Mar. 12,	Pequot st.....	From Calumet st. to Wait st....	144.00
Aug. 25,	Peverell st....	From Sawyer ave. to Salcombe st.	487.00
July 15,	Queensberry st	From Audubon road to another part of said Audubon road....	1,737.74
Feb. 6,	Robin Hood st.	From Magnolia st. to Hartford st.	798.54
Oct. 8,	Rand st.....	From Julian st. to Brookford st.	321.70
Aug. 6,	Rosseter st...	From Bullard st. to Bowdoin ave.	850.00
April 8,	Summer st....	From Purchase st. to the harbor commissioners' line in Fort Point channel....	845.33
April 28,	Surrey st.....	From Parsons st. to Market st...	555.19
Oct. 26,	St. Stephen st.	To Bryant st.....	803.25
Dec. 11,	Selkirk road..	From Chiswick road to Kilsyth road.....	690.00
Dec. 11,	Sidlaw road...	From Commonwealth ave. to Chiswick road.....	326.00
Nov. 30,	St. Rose st....	(Formerly Johnston) from Jamaica st.	594.54
July 8,	Tonawanda st.	From Geneva ave. to Greenbrier st.....	1,917.00
June 1,	Van Winkle st.	From Carruth st. to Randolph terrace	405.96
June 1,	Wessex st....	From Codman st. to Weyanoke st.	374.52
Aug. 31,	Waterlow st...	From Harvard st. to Harvard st.	545.00
Nov. 30,	Woodlawn st..	From Hyde Park ave. to Forest Hills Cemetery.....	1,061.74
Jan. 31,	Wensley st. ...	From Heath st. to Bickford ave..	713.00
Nov. 27,	West Selden st.	From Morton st.....	3,411.00
			60,104.96

Streets Ordered to be Constructed.

DATE.	Street.	Location.
Jan. 25,	Astor st.....	From Massachusetts ave. to Parker st., Back Bay.
Dec. 18,	Barrington st....	From Bowdoin st. to Homes ave., Dor.
Sept. 23,	Belmore terrace..	From Boylston st. to Boylston ter., J. P.
Sept. 10,	Belvidere st.....	From Dalton st. to West Newton st., Back Bay.
Aug. 31,	Bernard st.....	From Harvard st. to Talbot ave., Dor.
July 8,	Bloomfield st....	From Geneva ave. to Greenbrier st., Dor.
June 21,	Burt st.....	From Ashmont st. to Morton st., Dor.
June 1,	Bushnell st.....	From Beale st. to Weyanoke st., and over a private way known as Randolph ter., Dorchester.
Nov. 11,	Carlos st.....	From Lauriat ave. to Chapman ave., Dor.
Nov. 5,	Chamblet st....	From Magnolia st. to Hartford st., Dor.
July 22,	Charlesview st., formerly Bige- low st.....	From another part of said Bigelow st. to Newton st., Brighton.
Aug. 5,	Chiswick road...	From Englewood ave. to Chestnut Hill ave., Brighton.
Aug. 31,	Columbia road...	From Franklin Park to Marine Park, Dorchester and South Boston.
April 14,	Fairmount st....	From Washington st. to Morton st., Dor.
July 8,	Greenbrier st....	From Bloomfield st. to Park st., Dor.
Nov. 19,	Hardwick st....	From Bigelow st. to Dunboy st., Bri.
Dec. 18,	Harold st.....	From Munroe st. to Walnut ave., Rox.
Oct. 28,	Idaho st.....	From River st., Dorchester.
Oct. 6,	Ipswich st.....	From Boylston road, across the Fens to Boylston st., Back Bay.
Nov. 17,	Leedsville st....	From Dorchester ave. to Adams st., Dor.
Aug. 19,	Leroy st.....	From Geneva ave. to Ditson st., Dor.
Nov. 10,	Lonsdale st.....	From Dorchester ave. to Adams st., Dor.
Dec. 16,	Maryland st.....	From Savin Hill ave. to Bay st., Dor.
Aug. 6,	Malvern st.....	From Brighton ave. to Ashford st., Bri.
Nov. 23,	Nightingale st...	From Talbot ave. to Bernard st., Dor.
Oct. 26,	Oakley st.....	From Bowdoin st. to Geneva ave., Dor.
Aug. 25,	Peeverell st.....	From Sawyer ave. to Salcombe st., Dor.
July 15,	Queensberry st..	From Audubon road to another part of said road, Back Bay.
Aug. 6,	Rosseter st.....	From Bullard st. to Bowdoin ave., Dor.
Oct. 26,	St. Stephen st...	To Bryant st., Back Bay.
July 8,	Tonawanda st....	From Geneva ave. to Greenbrier st., Dor.
Nov. 27,	West Selden st...	From Morton st., Dorchester.
Nov. 30,	Woodlawn st....	From Hyde Park ave. to Forest Hills Cemetery.

Streets Widened and Relocated.

STREET.	Location.	Date.	Widening.	Discontinuance.
Adams st.	From Parkman st. to Park st., westerly side	Aug. 25,	8,282 square feet.	
Alford st.	From Main st. to Mystic river	June 9,	21,210 "	
Beacon st.	From Arlington st. to Massachusetts ave.	Dec. 14,	7,673 "	
Brooks st.	Between Holton st. and North Beacon st.	Dec. 17,	12,554 "	
Cambridge st.	Corner of Warren st.	April 2,	8,129 "	
Cove st.	From Kneeland st. to Summer st. extended	April 8,	62,506 "	
Columbia road ...	From Blue Hill ave. to Edward Everett sq.	Aug. 31,	573,086 "	
Congress st.	From Atlantic ave. to Fort Point channel	May 13,	11,607 "	
Centre st.	From Highland st. to Penuryth st.	Nov. 29,	.....	990 square feet.
Franklin st.	From Main st. to High st.	Feb. 1,	.....	273 "
Freeport st.	Between Park and Capen sts.	Oct. 8,	1,539 square feet.	
Green st.	Between Main st. and High st.	Nov. 24,	2,227 "	
Harold st.	At Hutchings st. and Seaver st.	Dec. 18,	1,777 "	
Menlo st.	Near Sparhawk st.	April 9,	38 "	55 "
Old road	South of its intersection of Glenway st.	March 15,	.....	" "
River st.	Near Hyde Park line, on northerly side.	Aug. 19,	275.5 square feet.	" "
Summer st.	From Purchase st. to Atlantic ave.	April 8,	4,177 "	23,472 "
School st.	At corner of Athelwold st.	Nov. 29,	548 "	80 "
Tremont st.	And Boylston st. at their junction.	April 14,	4 "	4 "
Weld st.	From Church st. to Maple st.	Jan. 16,	55,438 "	
Wait st.	From Huntington ave. to Hillside st.	Sept. 14,	6,862 "	
Washington st ...	And Bartlett st. at their junction	Nov. 23,	186 "	
Whitney st.	Between Smith st. and Conant st. ..	Dec. 14,	1,778 "	

The records of the Street Commissioners for the year 1897 show the following results :

Streets laid out or extended	60,104.96 linear feet.
Streets widened and relocated	779,896.5 square feet.
Streets discontinued	24,874 square feet.
Increase in mileage	11.38 miles.

Permits for excavating have been issued from this office during the year ending January 31, 1898, as follows :

STREET OPENINGS.

	Permits.	Feet.
American Telegraph Co.	4	912
Boston Electric Light Co.	629	44,410
Boston Fire Department.	9	4,801
Boston Gaslight Co.	556	24,679
Boston & Albany R.R. Co.	1	125
Boston Lamp Department.	227	4,315
Boston Low Tension Wire Association	20	2,390
Boston & Maine R.R. Co.	30	450
Boston Park Department	12	500
Boston Street Department, Sewer Division	234	48,470
Boston Water Department, Eastern Division	3,435	208,390
Boston Water Department, Income Division	341	1,463
Brookline Gaslight Co.	405	48,329
Boston, Revere Beach & Lynn R.R.	1	100
Boston Elevated Railway Co.	359	182,082
Bay State Gas Co.	2	1,000
Charlestown Gaslight Co.	94	6,839
Church Green L. & P. Co.	7	1,015
Dorchester Gaslight Co.	533	59,148
Department Public Grounds	6	150
Edison Electric Illuminating Co.	651	81,975
East Boston Gaslight Co.	126	8,701
Fitchburg R.R. Co.	16	375
Jamaica Plain Gaslight Co.	205	15,568
Lynn & Boston R.R. Co.	3	7,300
Metropolitan Sewerage Commission	4	220
Metropolitan Water Commission	4	10,713
Metropolitan Construction Co.	11	1,200
New England Telephone & Telegraph Co.	341	55,271
N. Y., N. H. & H. R.R. Co.	16	150
N. Y. & N. E. R.R. Co.	2	100
Norfolk Suburban Street Railway Co.	3	450
National Contracting Co.	2	500
Postal Telegraph & Cable Co.	4	300
Police Department	40	15,623
Quincy Market Cold Storage Co.	65	3,998
Roxbury Gaslight Co.	605	22,887
South Boston Gaslight Co.	278	18,249
Standard Oil Co.	16	500
Suburban Light and Power Co.	30	50
Snow, F. A. (Boston Pneumatic Transit Co.)	6	3,000
Union Freight R.R. Co.	5	950
Western Union Telegraph Co.	28	13,233
West Roxbury & Roslindale Street Railway Co.	6	10,730
Water Department, Engineering Division	5	175
Miscellaneous.	3,760	206,319
Emergency permits	880	8,800
Total	14,017	1,126,905

Total number of feet opened was 1,126,905 feet.

Making the total length of openings about 213.4 miles.

Permits other than for opening streets have been issued as follows :

Advertising, by men wearing hat and coat lettered.....	30
Clearing snow from roof	129
Driving cattle	11
Distributing sand.....	9
Erecting, repairing and removing awnings	4,312
Erecting and repairing buildings	4,707
Feeding horses on the street	421
Moving buildings.....	42
Loading and unloading goods	483
Pedlers, two different classes.....	641
Placing signs flat on buildings	1,656
Raising and lowering safes, machinery, etc.	524
Special, for various purposes.....	196
Permit extensions	783
Selling from areas	51
Selling from buildings	775
Special for June 17	103
Total	<u>14,873</u>

Total number permits for street openings . . .	14,017
Total number permits for all other purposes . . .	14,873

Grand total	<u>28,890</u>
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Three hundred postal cards and 1,500 notices have been sent to storekeepers and householders in connection with selling from windows, etc.

During the year there have been 14,683 notices sent the various foremen, directing them to repair defects in the public streets, which have been reported by the police and others; also 5,262 notices to private parties to repair work improperly done when permits had been granted to open the streets, and to owners of estates where coal-holes and sidewalk lights were defective.

There have been 452 notices sent to departments, corporations and others regarding proposed street improvements.

There have been 472 new bonds filed during the year.

There have been 125 claims investigated, and about 50 notices sent to owners and other parties.

Cash to the amount of \$12,798.50 for permits has been received and deposited with the City Collector.

There is \$7,519.50 due for permits at this date from corporations and departments.

Street numbers have been assigned to the estates in the different districts as follows :

City proper	3 whole, and 5 parts of streets.
Dorchester District	9 whole, and 239 parts of streets.
Roxbury District	3 whole, and 67 parts of streets.

West Roxbury	4 whole, and 120 parts of streets.
Brighton District . . .	2 whole, and 46 parts of streets.
South Boston District . .	29 parts of streets.
Charlestown District . . .	1 whole, and 17 parts of streets.
East Boston District . . .	21 parts of streets.

Total 22 whole, and 596 parts of streets.

About 5,500 figures were required for this work.

Plans of seventeen streets with numbers have been drawn ready for assignment when called for.

APPENDIX D.

REPORT OF THE DEPUTY SUPERINTENDENT OF
THE SANITARY DIVISION.

ROOMS 917-920 TREMONT BUILDING,
BOSTON, February 1, 1898.

BENJ. W. WELLS, ESQ.,

Superintendent of Streets :

DEAR SIR: I hereby respectfully submit the annual report of the expenditures, income and operation of the Sanitary Division of the Street Department for the financial year ending January 31, 1898.

Respectfully submitted,

PATRICK O'SHEA,
Deputy Superintendent.

The work of the Sanitary Division includes the removal of house-offal and the removal of house-dirt and ashes, accumulated from the burning of materials for heating buildings and for domestic purposes.

The following table shows the amounts expended for the maintenance of the Sanitary Division for the past five (5) years :

1893	\$481,300 63
1894	467,459 02
1895	432,778 52
1896	476,807 34
1897	492,670 56

Comparative Table, showing Net Cost of Maintenance of the
Sanitary Division to the City of Boston.

	Expended.	Income.	Net Cost to City.
1893	\$481,300 63	\$32,056 27	\$449,244 36
1894	467,459 02	42,320 55	425,638 47
1895	432,778 52	42,985 53	389,792 99
1896	477,241 54	36,146 77	441,094 77
1897	492,670 56	34,430 48	458,240 08

OFFAL.

The method of disposing of offal and garbage during 1897 was, as in preceding years, to sell the material to farmers in neighboring towns, the portion not disposed of in this manner being towed to

sea. Out of 56,783 loads collected during the past year in the city and suburbs, 43,207 loads, or 76 per cent., was fed to hogs, and 13,576 loads, or 24 per cent., carried in dumping-boats to the sea.

On April 1, 1897, the dumping and disposal of offal at Highland street, Roxbury, was abandoned, at the solicitation of the Board of Health, the Institutions Commissioner, and by vote of the City Council. By this action it has, to a certain extent, increased the cost of collecting offal in Roxbury and a part of West Roxbury, and decreased the revenue to the city from the sale of the material.

A more sanitary way of disposing of the city offal has long been under consideration, and, as the result of investigation made by a committee appointed by the city government, a contract for a term of ten years was made with the New England Sanitary Product Company, in January, 1898, by the provisions of which nearly 77 per cent. of the collection is conveyed to an isolated point within the city limits and treated by a method known as the Improved Arnold process, which disposes of it in an unobjectionable manner. Provision was also made for extending the scope of the contract so as to include the outlying sections of the city, when advisable.

During the year twenty-two new steel-bodied dumping wagons have replaced the same number of wooden wagons which were unfit for further service, and it is intended to substitute them generally for the wooden wagons, as they are much better adapted for the collection of offal.

ASHES.

Of the 389,098 loads of ashes collected during the past year, 243,556 loads, or 63 per cent., were deposited on low lands in the outlying districts of the city; 100,905 loads, or 26 per cent., were towed to sea, and the balance, 44,637 loads, or 11 per cent., were collected by contractors and used on low lands for filling.

The material designated "ashes" includes, besides the material itself, the general refuse of the city, such as store-sweepings, papers, and rubbish of all kinds, and our method of disposing of it has many objectionable features. Some of the refuse which is towed to sea is of such light composition that it often floats back to the neighboring beaches, and is the cause of frequent complaint from the residents. There has also been complaint from dumps unavoidably located near residential sections, owing to papers and other light refuse being blown about by the winds.

It is the purpose of this division to obviate this difficulty, at least in a measure, by the erection, this year, of one or more furnaces, suitable for the burning of such combustible waste, arrangements for same being already in progress, and it is estimated that material, having a commercial value, which can be culled from the refuse, will cover the entire cost of the operation of the proposed furnaces. In view of this plan, householders in one section of the city were requested, nearly six month ago, to keep papers and other refuse of a combustible nature in a separate receptacle, or to tie the same in bundles, to facilitate their removal. The system has worked satisfactorily where it has been tried, and it will be further extended.

Owing to the bulky nature of the material termed ashes, it was deemed advisable to enlarge the ash-carts by the addition of boards on the sides and ends, thereby increasing their capacity by about one-third. Some objection was made to this change by employees

in this division, but the introduction of a scales at one of the larger dumps soon demonstrated the utility of the measure, the average weight of several thousand loads collected in the enlarged carts being only 1,500 pounds. If the separation of papers and light refuse from ashes can be successfully compassed throughout the city, a suitable cart for collecting same will be introduced.

A change, productive of good results, was made in the collection of store-sweepings in what is known as the business section of the city, the occupants of stores, etc., being requested, by the distribution of printed notices, to put out all waste material previous to 7.30 A.M., so that the collectors could remove it while the streets were passable, much annoyance and inconvenience which had previously existed being in a large measure prevented.

I would again call your attention to the dilapidated condition of the stables in charge of this division, and earnestly recommend that a special appropriation be made for their renovation.

Several complaints have been received concerning the failure of the division to promptly remove offal and ashes; investigation of these has usually shown that either offal has not been properly separated from ashes or other refuse, as is insisted upon by the department, or else that the receptacles were kept in some inaccessible place, or were larger than the ordinances provide and the regulations of the department permit.

In order that householders might understand these regulations and that the work be not unnecessarily delayed, the following circular was issued:

It will be noted that the circular also requires a third separation, viz.: that all refuse other than household ashes or offal be placed in a third receptacle. This was done in anticipation of an arrangement for caring for the combustible waste separate from the heavy ash by incineration.

Notice to Housekeepers.

On and after Monday, Oct. 11, 1897, nothing but GARBAGE, FOOD CANS and FOOD BOTTLES must be put into the garbage receptacles, and nothing but DUST and ASHES must be put into the receptacles for ashes.

ALL PAPERS, LIGHT WASTE and other GENERAL REFUSE must be placed in a third receptacle, or, if too bulky, must be tied in bundles to prevent their being scattered in handling, and MUST BE PROTECTED FROM THE WEATHER until collected by the proper authorities.

GENERAL REFUSE includes the following:

Paper,	Excelsior,	Old shoes and rubbers,
Rubbish,	Straw,	Leather and rubber scraps,
Bottles,	Mattresses,	Carpets,
Rags,	Old clothes,	Broken glass, etc.,
Tin cans,	Pasteboard boxes.	

The Superintendent of Streets of the City of Boston is required to remove ashes and OTHER REFUSE, and is governed by the following provisions of law:

Acts of 1892, Chapter 419, Section 112. — All receptacles for ashes, waste and other substances, liable, by spontaneous combustion or otherwise, to cause a fire, shall be made of incombustible material, satisfactory to the inspector. Every building used as a tenement or lodging house shall have outside, and appurtenant to it, a suitable space, satisfactory to the inspector, for the temporary deposit of garbage and other refuse matter.

Revised Ordinances of 1892, Chapter 43, Section 14. — No person shall keep in his house, or on his land, any house offal, unless the same is placed in a suitable vessel, free from ashes and other refuse matter, and so placed as to be easily removed.

Revised Ordinances of 1892, Chapter 43, Section 17. — No person shall place or keep in or near any building, ashes or cinders in such a manner as to be liable to cause fire, nor mix them with other substances, nor place or keep them except in metallic vessels, so placed as to be easily removed.

The Superintendent of Streets, therefore, calls attention to the necessity of keeping ASHES and OTHER REFUSE MATTER as required by law, and gives notice that NO REFUSE WILL BE REMOVED unless protected from the weather, and so placed as to be easily removed, and kept as follows:

1. ASHES must be kept free from all other refuse matter and in metallic vessels.

2. HOUSE OFFAL or garbage must be kept free from all other refuse matter (except FOOD CANS and FOOD BOTTLES), and in suitable vessels.

3. ALL OTHER REFUSE must be kept free from ashes and garbage and in suitable vessels, or in bundles firmly fastened, so as to prevent the rubbish from being scattered in handling.

PATRICK O'SHEA,
Deputy Superintendent, Sanitary Division.

BENJAMIN W. WELLS,
Superintendent of Streets.

Also the annual spring cleaning of the entire city was undertaken with good results, and the following notice issued to the public:

CITY OF BOSTON.

Notice to Housekeepers and Tenants.

Housekeepers and other occupants of dwellings are requested to place their house and cellar dirt and sweepings in the streets opposite their premises between the hours of sunrise and 2 o'clock P.M. of the following days: Monday, May 3; Tuesday, May 4; Wednesday, May 5; Thursday, May 6; Friday, May 7, when they will be removed by the city carts. After which times no person will be allowed to place any dirt, ashes, filth or rubbish of any kind whatever in any of the ways, streets or places of the city, without a permit from the Superintendent of Streets.

Dirt of any kind not to be placed in the streets on Saturday.

CITY HALL, BOSTON, 1897.

BENJAMIN W. WELLS,
Superintendent of Streets.

NOTE. — This circular, printed in English, Hebrew and Italian, was posted in prominent places by the regular bill-posting companies, and for a week was also carried on the sides of all the wagons and carts owned by this division.

Special Notice.

On and after above-named days, ashes, etc., in order to be removed by city carts, must be placed in receptacles not larger than an ordinary flour barrel, and in a position on a level with the grade of the adjoining sidewalk.

Vault filth, offal, bricks and mortar, gravel and earth, garden rakings and shrubbery are not included in the above, and will not be removed by the city if placed in the streets.

During the year the wheelwright, blacksmith, paint, harness and horseshoeing shops of this division at the South Yard were continued with competent mechanics upon the same basis as any journeyman shop in the city: the repairs and some constructive work of this and other divisions has been done cheaply and well. A statement of the work performed will be found on pages 225 to 236.

The following table shows the number of loads of house offal collected and removed in the last five (5) years:

Year.	<i>Amount of House Offal Removed.</i>										No. of Loads.
1893	.	.	.	.	.	.	.	.	.	.	51,415
1894	.	.	.	.	.	.	.	.	.	.	50,637
1895	.	.	.	.	.	.	.	.	.	.	51,327
1896	.	.	.	.	.	.	.	.	.	.	56,402
1897	.	.	.	.	.	.	.	.	.	.	56,783

Each load of offal is equivalent to fifty-six (56) cubic feet, and has a maximum weight of one and a quarter ($1\frac{1}{4}$) tons at certain seasons of the year.

Of the amount, 56,783 loads, collected during the year 1897, 3,720 were collected by the East Boston contractor, 1,520 by the Brighton contractor, 4,712 by the Dorchester contractor, and 760 loads by the West Roxbury contractor, leaving 46,071 loads collected by city teams.

The collection of this material is attended to in winter by an average regular force of 75 city offal carts and 171 men, and on contract work 17 offal carts and 34 men, making a total of 92 offal carts and 205 men. At different times, and especially in summer, an approximate extra force of 21 teams and 42 men are employed.

The disposal has been made during the year in the following manner: The offal from the markets and the offal that is decayed is put on board a scow and towed to sea; the offal of Charlestown is taken to the yard at Malden bridge and there disposed of to farmers; the offal of East Boston is collected by a contractor and is removed to Revere; the offal of the city proper, Roxbury, a part of West Roxbury and South Boston is conveyed to the yard at the South End and disposed of to farmers, who remove it daily; a portion of the collections of West Roxbury is collected by contract and removed to Needham; the offal of Brighton is collected by contract and disposed of outside of the district; the offal in Dorchester is collected by a contractor and sold to farmers.

Collection and Disposal of Offal.

Year.	Total amount collected.	Amount sold.	Amount dumped on scow and towed to sea or wasted.	Per cent. wasted to total collection.	Amount of receipts from sales.
1893 ¹	46,276 loads.	30,824 loads.	15,363 loads.	30 per cent.	\$20,790 03
1894 ²	42,082 "	37,057 "	5,025 "	12 "	26,262 40
1895 ³	41,480 "	36,620 "	4,860 "	12 "	27,374 47
1896 ⁴	45,844 "	35,549 "	10,295 "	22 "	21,187 76
1897 ⁵	46,071 "	32,495 "	13,576 "	29 "	17,416 75

¹Twelve months. Above table does not include contracts in East Boston and Brighton.

²In East Boston, 3,720 loads; Brighton, 1,539 loads; Dorchester, 3,296 loads,—total, 8,555 loads,—collected during 1894 are not included in above table. For 1891 and 1892, East Boston and Brighton were estimated at 5,100 loads.

³In East Boston, 3,732 loads; Brighton, 1,419 loads; Dorchester, 4,179 loads; West Roxbury, 517 loads—total, 9,847 loads,—collected during 1895 not included in above table.

⁴In East Boston, 3,786 loads; Brighton, 1,362 loads; Dorchester, 4,707 loads; West Roxbury, 703 loads—total, 10,558 loads,—collected during 1896 not included in above table.

⁵In East Boston, 3,720 loads; Brighton, 1,520 loads; Dorchester, 4,712 loads; West Roxbury, 760 loads—total, 10,712 loads,—collected during 1897 not included in above table.

The following table shows the full force engaged in the collection of offal alone throughout the entire city:

The Force Employed.

CITY FORCE.	No.	Hired Teams.	CONTRACTORS' TEAMS.				Total.
			East Boston.	Brighton.	Dorchester.	West Roxbury.	
Sub-foremen	3	.....	1	.....	.....	1	5
Inspectors	8	.....	.....	1	1	.....	10
Offal clerks	1	.....	.....	.....	.....	.....	1
Teamsters	69	6	6	2	8	1	92
Helpers	69	6	6	2	8	1	92
Dumpers	5	.....	.....	.....	.....	.....	5
Totals	155	12	13	5	17	3	205

REMOVAL OF ASHES AND HOUSE DIRT.

The removal of ashes, house and store dirt has been attended to during the year by a minimum force of 330 men and 145 city carts, also by five carts with an East Boston contractor, seven carts with Dorchester contractors, and two carts with a West Roxbury contractor.

This work shows a constant increase from year to year, as will be seen in the following table, and is an indication of the actual growth of the city :

AMOUNT OF ASHES, HOUSE AND STORE DIRT REMOVED.

Year.	No. of Loads.	
1893	320,571	of 44 cubic feet
1894	326,798	" " " "
1895	336,886	" " " "
1896	363,975	" " " "
1897	1,389,098	" " " "

¹ Previous to the year 1897, each load of ashes contained about 44 cubic feet. During the year 1897 all the ash-carts owned by the city were equipped with side-boards, increasing their capacity to 54 cubic feet, but for the purpose of comparison the old basis has been used.

The following table shows the force engaged in this collection throughout the entire city:

The Force Employed.

CITY TEAMS.	No.	Hired Teams.	CONTRACTORS' TEAMS.				Total.
			North Dorchester.	South Dorchester.	East Boston.	West Roxbury.	
Sub-foremen	6	.....	.....	.....	1	1	8
Inspectors.....	5	.....	1	.....	.....	.....	6
Tallymen.....	3	.....	.....	.....	.....	.....	3
Teamsters.....	104	41	4	3	5	2	159
Helpers	110	41	4	3	5	2	165
Dumpers.....	20	.....	.....	.....	.....	.....	20
Totals	248	82	9	6	11	5	361

Comparative Statement of Number of Loads of Ashes Collected during Sixteen Weeks of the Summer and Sixteen Weeks of the Winter.

Summer.	Loads.	Winter.		Loads.	Difference for Winter.	Loads.
April 29, 1893, to August 18, 1893	91,721	October 28, 1893, to February 16, 1894		106,851	1893	15,130
“ 27, 1894, “ “ 16, 1894	88,865	“ 25, 1894, “ “ 7, 1895		116,915	1894	28,050
“ 26, 1895, “ “ 15, 1895	94,671	“ 18, 1895, “ “ 6, 1896		121,873	1895	27,202
“ 30, 1896, “ “ 13, 1896	101,135	“ 16, 1896, “ January 28, 1897		117,214	1896	16,079
“ 29, 1897, “ “ 19, 1897	109,366	“ 15, 1897, “ “ 27, 1898		126,057	1897	16,691

Final disposition of all material collected from February 1, 1897, to February 1, 1898, together with the portion of street sweepings and cesspool dirt, disposed of for other divisions by the Sanitary Division, is shown in the following table:

	Amount collected.	Deposited on low lands.	Towed to sea.	Collected by con- tractors.	Sold to farmers.
	<i>Loads.</i>	<i>Loads.</i>	<i>Loads.</i>	<i>Loads.</i>	<i>Loads.</i>
Ashes, house and store dirt	389,098	243,556	100,905	44,637	
House ofal.....	56,783	2,226	13,576	¹ 10,712	30,269
Street sweepings	29,831	.....	29,831		
Cesspool dirt	2,998	.....	2,998		
	478,710	245,782	147,310	55,349	30,269

¹This amount is included in the amount collected, 56,783. Of the 10,712 loads, 3,720 were collected in East Boston, 4,712 in Dorchester, 1,520 in Brighton, and 760 in West Roxbury.

The total expenditures of the division, including work done for other divisions and paid for by them, was .	\$523,487 04
Less amount so repaid	30,816 48
	\$492,670 56
Cash paid and bills rendered to City Collector	34,430 48
Net cost of maintenance of Sanitary Division, February 1, 1897, to January 31, 1898	\$458,240 08

Details of expenditures, income and operation will be found on pages 216 to 218.

FINANCIAL STATEMENT.

Amount of appropriation	\$460,000 00
Transferred from Surplus Revenue	32,670 56
Total amount appropriation	\$492,670 56
Total amount expended	<u>\$492,670 56</u>

INCOME.

Amounts of moneys deposited and bills presented to the City Collector for collection for material sold and work performed by the Sanitary Division of the Street Department during the year ending January 31, 1898.

On February 1, 1898, checks for \$2,649.80 were not deposited with the City Collector, as the messenger of the Sanitary Division, who was custodian of same, was unable to reach the office on account of the severe storm, hence the collector did not credit the division with the amount, \$2,649.80, included in above table.

Moneys deposited with City Collector.

From sale of house-offal	\$17,416 75	
From letting of scow privileges	1,314 55	
		<u>\$18,731 30</u>

Bills deposited with City Collector.

For the removal of engine ashes	\$14,176 58	
For the sale of manure	499 00	
For the letting of scow privileges	23 60	
For the letting of Fort Hill Wharf	1,000 00	
		<u>15,699 18</u>
		<u>\$34,430 48</u>
Amount collected by the Collector		<u>\$35,640 33</u>

Objects of Expenditures.

ITEMS.	Total amount expended.	Amount paid by other Divisions.	Amount charged to the Sanitary Division.
Salary of Deputy Superintendent	\$3,000 00	.....	\$3,000 00
Salaries clerks and messengers in office	7,388 61	.....	7,388 61
For labor in collecting and removing house dirt and ashes, ...	139,016 78	\$13,028 98	125,987 80
For labor in collecting and removing house offal	87,309 14	10,403 32	76,905 82
For labor of foremen	8,353 28	386 25	7,967 03
For labor of sub-foremen and inspectors collecting house offal	9,124 91	740 81	8,384 10
For labor of sub-foremen and inspectors collecting house dirt and ashes	11,631 53	741 75	10,889 78
For labor of men employed in stables and yards	21,188 13	1,013 37	20,174 76
For holidays allowed time	18,828 90	1,480 73	17,348 17
For labor, stock and tools used in blacksmith shop	6,836 41	506 35	6,330 06
For labor, stock and tools used in wheelwright shop	9,471 19	368 73	9,102 46
For labor, stock and tools used in harness shop	5,057 52	263 79	4,793 73
For labor, stock and tools used in paint shop	7,098 71	425 41	6,673 30
For labor, stock and tools used in horseshoeing shop, ...	5,924 83	230 38	5,694 45
For labor, rental, towage, etc., on account of dumping boats	21,596 67	6 45	21,590 22
For shoeing horses outside of shop	1,026 39	.....	1,026 39
<i>Carried forward</i>	\$362,853 00	\$29,596 32	\$333,256 68

Objects of Expenditures. — *Continued.*

ITEMS.	Total amount expended.	Amount paid by other Divisions.	Amount charged to the Sanitary Division.
<i>Brought forward</i>	\$362,853 00	\$29,596 32	\$333,256 68
For extra teams collecting ashes and house dirt	59,906 50	.. .....	59,906 50
For extra teams collecting house offal	6,234 50	.....	6,234 50
For grain used in stable	15,110 89	92 70	15,018 19
For hay and straw used in stable	14,332 82	1,089 69	13,243 13
For horses	5,977 00	.....	5,977 00
For repairs on stable and sheds	4,702 15	.....	4,702 15
For fuel	884 05	20 82	863 23
For gas	408 02	.....	408 02
For electric light	494 20	.....	494 20
For medical attendance and medicine	2,332 94	.....	2,332 94
For printing	1,953 12	.....	1,953 12
For stationery	784 13	.....	784 13
For advertising	480 14	.....	480 14
For water-rates	740 40	.....	740 40
For ash stock, consisting of shovels, cart covers, etc....	753 01	.....	753 01
For offal stock, consisting of wagons, buckets, disinfectants, etc.	4,761 48	.....	4,761 48
For stable stock, consisting of sponges, brushes, curry-combs, etc.	1,133 69	16 95	1,116 74
For collecting house dirt and ashes in East Boston	7,474 96	.....	7,474 96
For collecting house dirt and ashes in Dorchester, south of Park, School and Harvard streets	4,035 09	.....	4,035 09
For collecting house dirt and ashes in Dorchester, north of Park, School and Harvard streets	4,387 44	.....	4,387 44
For collecting house dirt and ashes in West Roxbury, south of Pond, May, Arborway and Morton streets....	2,084 44	.....	2,084 44
For collecting house offal in East Boston	8,000 00	.....	8,000 00
For collecting house offal in Brighton	1,999 92	.....	1,999 92
For collecting house offal in part of West Roxbury	1,488 00	.....	1,488 00
For collecting house offal in Dorchester	5,897 00	.....	5,897 00
<i>Carried forward</i>	\$519,208 89	\$30,816 48	\$488,392 41

Objects of Expenditures. — *Concluded.*

ITEMS.	Total amount expended.	Amount paid by other Divisions.	Amount charged to the Sanitary Division.
<i>Brought forward</i>	\$519,208 89	\$30,816 48	\$488,392 41
Incidentals:			
Tolls and fares.. \$1,050 00			
Telephones 522 11			
Office expenses and items 133 00			
Rents 756 25			
Board and use of horses 696 04			
Damage by city teams..... 25 15			
Driving sleigh... 45 00			
Recording and registering ... 208 00			
Miscellaneous supplies for stable 172 55			
Swett-street scales 200 00			
Newspapers 6 00			
Maps, plans, atlas, etc. 324 75			
Office annuncia- tor, installation 89 30			
	4,278 15	.....	4,278 15
	\$523,487 04		\$492,670 56
Paid by Street Cleaning Divi- sion			15,512 87
Paid by Paving Division.....			6,733 48
Paid by Sewer Division.....			5,850 69
Paid by Central Office			971 76
Paid by Street Watering Divi- sion			421 52
Paid by Bridge Division			138 77
Paid by County of Suffolk ...			1,182 39
Total	\$523,487 04	\$30,816 48	\$523,487 04

Total Cost for Removal of House-dirt, Ashes and House-offal.

HOUSE-DIRT AND ASHES ACCOUNT.

Expended for labor, as per pay-rolls . . .	\$150,648 31	
Expended for stock, etc., as per ledger account, . . .	153,667 51	
Expended on contracts, Dorchester . . .	8,422 53	
Expended on contracts, East Boston . . .	7,474 96	
Expended on contract, part of West Roxbury, . . .	2,084 44	
		\$322,297 75
<i>Carried forward,</i>		\$322,297 75

HOUSE-OFFAL ACCOUNT.

<i>Brought forward,</i>		\$322,297 75
Expended for labor, as per pay-rolls . . .	\$96,434 05	
Expended for stock, etc., as per ledger account, . . .	72,703 20	
Expended on contract, East Boston . . .	8,000 00	
Expended on contract, Brighton . . .	1,999 92	
Expended on contract, Dorchester . . .	5,897 00	
Expended on contract, West Roxbury . . .	1,488 00	
		186,522 17
Salaries	\$10,388 61	
Incidentals	4,278 51	
		14,667 12
Total		<u>\$523,487 04</u>

Comparative Table showing the Cost of Collecting Ashes and Offal and Delivering same at various Dumps.

Cost per cart-load, including administration expenses . . .	\$1 10
“ “ “ minus “ “ . . .	1 07
“ “ “ of ashes, hired teams and contracts . . .	53
“ “ “ “ labor, hired teams, contracts, etc., . . .	83
“ “ “ “ offal “ “ “ “ . . .	3 28
“ “ “ “ hired teams and contracts . . .	1 77
“ “ dumping-boat load to transport garbage to sea . . .	65 24
“ “ cart-load “ “ “ “ . . .	15

Amount expended for the Collection of House-dirt, Ashes and House-offal, Labor, Hired Teams and Contracts.

DISTRICTS.	Expended for Collecting.	
	Ashes.	Offal.
1—South Boston.....	\$17,068 88	\$8,772 50
2—East Boston	7,812 46	8,336 00
3—Charlestown.....	14,795 81	7,230 41
4—Brighton	6,627 00	2,403 67
5—West Roxbury.....	14,314 19	6,457 75
6—Dorchester	8,862 03	6,330 50
7—Roxbury.....	37,521 28	21,940 21
8-9—South End and Back Bay.....	72,062 78	53,857 68
10—West and North End.....	49,472 31	4,724 75
Totals.....	\$228,536 74	\$120,053 47

ASH CONTRACTS.

W. F. Hedrington,	\$7,474 96	for territory in East Boston.
Matthew E. Nawn,	491 11	} “ “ “ West Roxbury, south of Pond street.
John J. Moore....	1,593 33	
John McShane....	4,387 44	
		“ “ “ Dorchester, north of Park, School and Harvard streets.
Denis Flynn.....	2,837 75	} “ “ “ Dorchester, south of Park, School and Harvard streets.
John McShane....	1,197 34	

OFFAL CONTRACTS.

Thomas Mulligan.	\$8,000 00	for territory in East Boston.
Geo. T. Barnes....	1,488 00	" " " West Roxbury.
John Bradlee.....	3,167 83	" " " Dorchester.
John McShane.....	2,729 17	" " " Dorchester.
D. B. Morrill	1,999 92	" " " Brighton.

Expenses of Dumping-boats.

Amount expended for towing by department tow-boat	\$7,155 74	
Amount expended for towing by hired tow-boat,	2,145 00	
		\$9,300 74
Amount expended for repairs on boats . . .	\$339 50	
" " " " wharf . . .	2,277 59	
		2,617 09
Amount expended for labor, Captain . . .	\$1,800 00	
" " " crews and dumpers . . .	5,839 16	
		7,639 16
Amount expended for dredging		725 00
" " " rents		999 99
" " " canvas and screen		26 30

INCIDENTALS.

Amount expended for disinfectants	\$167 95	
" " " manila rope, blocks, etc.	25 89	
" " " telephone, salt, etc.	51 50	
" " " kerosene oil and supplies	14 89	
" " " coal	28 16	
		288 39
		<u>\$21,596 67</u>
Number of trips to sea by department tow-boat		281
" " " hired tow-boat		50
		<u>331</u>

Cost per trip, \$65.24.

Number of cart-loads of garbage carried to sea, 147,310.

Cost per cart-load, 15 cents.

Material Collected by Districts.

MATERIAL.	South End and Back Bay.	West End.	Roxbury.	Charlestown.	Brighton.	S. Boston.	E. Boston.	Dorchester.	W. Roxbury.	Total Loads.
House dirt and ashes	108,146	93,605	64,140	21,515	10,711	27,695	13,396	25,627	24,263	389,098
House offal....	25,326	2,533	9,198	2,773	1,520	4,025	3,720	4,712	2,971	56,783
Totals	133,472	96,138	73,338	24,288	12,231	31,720	17,116	30,339	27,234	445,881

Disposition of Material Collected.

WHERE DUMPED.	Loads of House Dirt and Ashes.	Loads of House Offal.	Loads of Street Sweepings, Street Cleaning Division.	Loads of Cesspool Mater, Sewer Division.	Total Loads.
Swett st., J. C. Cobb	30,181	.....	.....	.....	30,181
Norfolk ave., J. J. Nawn, <i>et als</i> , First st., East Cambridge, J. T. Scully	23,872	.....	.....	.....	23,872
Ward st., Sewall-Day Co.	19,938	.....	.....	.....	19,938
Mill pond, Charlestown, City Park Department	19,567	.....	.....	.....	19,567
Brookline ave., J. Barry	15,962	.....	.....	.....	15,962
Vale st., Choate Burnham estate	11,365	.....	.....	.....	11,365
Massachusetts ave., Mr. Brown, Russia wharf, Kendall & Stev- ens	11,213	.....	.....	.....	12,213
Parker st., Mr. Bowers	11,045	.....	.....	.....	11,045
Harold st., J. Stone	10,054	.....	.....	.....	10,054
First st., Commonwealth of Massachusetts	10,050	.....	.....	.....	10,050
Williams st., Mrs. Carey	9,879	.....	.....	.....	9,879
Centre st., O. Nawn	8,814	.....	.....	.....	8,814
Maverick st., East Boston Land Company	8,696	.....	.....	.....	8,696
E. Ninth st., H. J. Bowen, agt., 429 Medford st., Geo. H. Woods, Devon st., Frank Foster	8,540	.....	.....	.....	8,540
May st., F. A. Seaverns	5,994	.....	.....	.....	5,994
Congress st., Commonwealth of Massachusetts	5,641	.....	.....	.....	5,641
Various places, City teams ...	4,478	.....	.....	.....	4,478
Various places, contracts	3,806	.....	.....	.....	3,806
At sea by scows	3,731	.....	.....	.....	3,731
Sold to farmers	2,420	.....	.....	.....	2,420
E. Boston, by Thos. Mulligan..	24,304	2,226	.....	.....	26,530
Brighton, by D. B. Morrill	38,643	.....	.....	.....	38,643
Dorchester, by John McShane,	100,905	13,576	29,831	2,998	147,310
Dorchester, by John Bradley..	30,269	3,720	.....	.....	30,269
W. Roxbury, by G. T. Barnes ..	1,520	1,428	.....	.....	1,520
	1,428	3,284	.....	.....	1,428
	760	.....	.....	.....	3,284
	.....	760	.....	.....	760
Totals	389,098	56,783	29,831	2,998	478,710

Number of Loads of Material Collected from January 31, 1893, to February 1, 1898.

YEARS.	Ashes.	Offal.	Total Loads.
1893	320,571	51,415	371,986
1894	326,798	50,637	377,435
1895	336,886	51,327	388,213
1896	363,975	56,402	420,377
1897	¹ 389,098	² 56,783	445,881

¹ William F. Hedrington, East Boston, collected.....	13,396 Loads.
John McShane, North Dorchester, collected	14,336 "
John McShane, South Dorchester, collected	2,945 "
Denis Flynn, South Dorchester, collected	8,346 "
Matthew E. Nawn, part of West Roxbury, collected.....	1,674 "
John J. Moore, part of West Roxbury, collected....	3,940 "
	44,637 "

² Thomas Mulligan, East Boston, collected.....	3,720 Loads.
David B. Morrill, Brighton, collected	1,520 "
John McShane, Dorchester, collected	1,428 "
John Bradley, Dorchester, collected	3,284 "
George T. Barnes, part of West Roxbury, collected	760 "
	10,712 "

Material Collected, Cost of Hired Teams, Including Contracts.

	NUMBER OF LOADS.			AMOUNT EXPENDED.		
	Ashes.	Offal.	Total.	Ashes.	Offal.	Total.
South Yard.....	29,326	956	30,282	\$18,793 00	\$1,027 50	\$20,720 50
West Yard	19,276	2	19,278	10,617 50	10 00	10,627 50
Roxbury Yard	24,544	969	25,513	14,526 00	2,624 50	17,150 50
Charlestown Yard	2,427	217	2,644	1,553 50	602 50	2,156 00
Brighton Yard	6,573	⁷ 1,517	8,090	3,855 50	1,999 92	5,855 42
South Boston Yard.....	13,837	2	13,839	6,681 00	35 00	6,716 00
West Roxbury, by Roxbury Yard	7,060	453	7,513	3,880 00	1,035 00	4,915 00
West Roxbury, south of Pond and Morton sts., ashes, M. E. Nawn and J. J. Moore; offal, George Barnes.....	^{1,2} 5,614	⁸ 760	6,374	2,084 44	1,488 00	3,572 44
East Boston, ashes, W. F. Hedrington; offal, T. Mulligan	⁸ 13,396	⁹ 3,720	17,116	7,474 96	8,000 00	15,474 96
Dorchester, ashes, south of Park, School and Harvard sts., John McShane and Denis Flynn	^{4,5} 11,290		11,290	4,035 09		4,035 09
Dorchester, ashes, north of Park, School and Harvard sts., John McShane.....	⁶ 14,336		14,336	4,387 44		4,387 44
Dorchester, offal, John McShane and John Bradley ..		¹⁰ 115,488	5,488		5,897 00	5,897 00
	147,679	14,084	161,763	\$77,888 43	\$23,619 42	\$101,507 85

CONTRACTS.

Ashes.	Offal.
¹ Nawn	⁷ Morrill.....
² Moore	⁸ Barnes.....
³ Hedrington.....	⁹ Mulligan.....
⁴ McShane.....	¹⁰ McShane.....
⁵ Flynn.....	¹¹ Bradley.....
⁶ McShane.....	

Contracts.

OBJECT.	Contractor.	Price.	CONTRACT.	
			Commences.	Ends.
Removal of ashes, South Dorchester.....	Denis Flynn.....	\$3,850 00	April 10, 1897.	April 15, 1899.
" " " North Dorchester.....	John McShane.....	4,387 50	March 1, 1896.	March 1, 1898.
" " " part of West Roxbury.....	John J. Moore.....	2,100 00	April 10, 1897.	April 15, 1899.
" " " East Boston.....	W. F. Hedrington.....	7,500 00	February 1, 1896.	April 1, 1898.
" " house offal, East Boston.....	T. Mulligan.....	8,000 00	January 1, 1896.	January 1, 1899.
" " " West Roxbury.....	G. T. Barnes.....	1,488 00	April 1, 1895.	April 1, 1898.
" " " Dorchester.....	John Bradley.....	4,980 00	May 11, 1897.	May 12, 1900.
" " " Brighton.....	D. B. Morrill.....	2,000 00	May 1, 1895.	May 1, 1898.

Material Sold by Contract.

OBJECT.	Contractor.	Price.	Payments made to City Collector.
Manure of Horses at South Yard.....	G. A. Safford.....	\$2 00 a horse per year.	\$240 00
" " " West and Charlestown Yards.....	Geo. P. Winn.....	2 00 " " "	190 00
" " " Highland Yard.....	J. A. Budlong & Son.....	1 00 " " "	69 00

DIVISION OF AMOUNT EXPENDED.

	Hired Teams.	Contractors.	Total.
Ashes	\$59,906 50	\$17,981 93	\$77,888 43
Offal	6,234 50	17,384 92	23,619 42
Total	\$66,141 00	\$35,366 85	\$101,507 85

The money received from the sales of house offal is deposited monthly with the City Collector, and then credited to the sinking-fund of the City of Boston.

HOUSE DIRT AND ASHES.

In the collection of house dirt and ashes there are employed 361 men and 159 carts. This material is removed from hotels, tenement houses and stores daily; from dwelling-houses once a week.

The City Ordinances of 1892 (chapter 36) require that house dirt and ashes shall be kept in an easily accessible place for their removal, the men being obliged to enter the yards and remove the receptacles to the sidewalks, where their contents are dumped into the carts. The receptacles are then placed in their original position. The material is disposed of, if possible, on low lands, being used for filling, and is also dumped on scows, to be carried to sea. Of the amount collected last year, 26 per cent. was disposed of in this manner, viz., carried to sea.

There are four sections of the city let out by contract for the collection of house dirt and ashes. Dorchester contracts — South is held by Denis Flynn, and North Dorchester by John McShane; East Boston, by W. F. Hedrington, and a part of West Roxbury by John J. Moore.

The entire city proper, including Roxbury and a part of West Roxbury, together with South Boston, Charlestown and Brighton, are now done by day labor.

HOUSE OFFAL.

There are employed in the removal of house offal 205 men and 92 wagons. The offal is removed from dwelling-houses twice a week during the summer months, and once a week during the winter; from hotels, markets and restaurants it is removed daily. The men are required to enter yards, collect the offal, empty into wagons and deliver at the depots, located as follows: One on Albany street, one at the Almshouse, Charlestown; also to the dumping-boats located at Fort Hill Wharf on Atlantic avenue.

The offal is largely sold to farmers of adjoining towns; the remainder is dumped on the scows and carried to sea. About 24 per cent. of the quantity collected during the past year has been disposed of in this manner. The Dorchester, Brighton, East Boston and West Roxbury contractors dispose of offal at present in the same manner as the city itself, by sale to farmers.

At present there are four sections of the city let out by contract for the collection of house offal: East Boston, by T. Mulligan; Dorchester District, by John Bradley; Brighton District, by D. B. Morrill, and a portion of West Roxbury by George T. Barnes.

The cash revenue received from the sale of house offal for the past five years has been as follows:

1893	\$20,790 03
1894	26,262 40
1895	27,374 47
1896	21,884 11
1897 ¹	17,416 75

DIVISION REPAIR SHOPS.

Located at the South End yards, situated at No. 650 Albany street. At these shops all of the repairs on carriages, carts, wagons, etc., are made, together with the painting of the same; all harnesses are repaired and many made, and a portion of the horseshoeing done.

The mechanics in these shops are engaged also in making repairs on the vehicles, etc., sent by the different divisions of the Street Department; all street signs are painted for the Paving Division, and a certain amount of the horseshoeing is done for the several divisions.

WHEELWRIGHT SHOP.

Cost to maintain during the past year the sum of \$9,471.19, of which amount \$3,524.40 was expended for labor, and \$5,946.79 for stock. The carts, wagons and other vehicles of the division were properly overhauled, when in need of repairs, and the entire lot of ash and offal sleds were put in proper working order. Of the above amount expended in maintaining these shops, the following amounts were charged off to the several divisions, and others, for repairing, altering and putting in good condition their carts, wagons, watering-carts, sleds, etc.:

Paving Division	\$2,643 62
Sewer Division	1,229 86
Street Cleaning Division	45 16
Bridge Division	28 64
Street Watering Division	84 11
Central Office	177 60
County of Suffolk	4 80
	\$4,213 79

This leaves a net cost of \$5,257.40 for the repairs and construction of all work of this character for the Sanitary Division.

There are employed in this shop four wheelwrights and one helper.

¹ On account of the severe snowstorm of February 1, 1898, the last monthly deposit for the year 1897 was not credited to the Sanitary Division by the City Collector, for the reason that the check, amounting to \$1,335.25, was received too late on above-named day.

BLACKSMITH SHOP.

Cost to maintain during the past year the sum of \$6,836.41, of which amount, \$5,069.65 was expended for labor, and \$1,766.76 for stock. The carts, wagons and other vehicles of the division were properly overhauled when in need of repairs, and the entire lot of ash and offal sheds were put in proper working order. Of the above amount expended in maintaining these shops, the following amounts were charged off to the several divisions, for repairing, altering and putting in good condition their carts, wagons, watering carts, sleds, etc.:

Paving Division	\$1,488 73
Sewer Division	1,500 63
Street Cleaning Division	28 13
Bridge Division	58 83
Street Watering Division	112 66
Central Office	328 87
	<u>\$3,517 85</u>

This leaves a net cost of \$3,313.56 for the repairs and construction of all work of this character for the Sanitary Division.

There are employed in this shop six blacksmiths and one helper.

PAINT SHOP.

Cost to maintain \$7,098.71, of which amount, \$5,941.97 was expended on labor and \$1,156.74 for stock. The work done by this shop was the painting and lettering of that which was either built or repaired in the wheelwright or blacksmith shops, together with 1,186 different styled signs that were painted for the Paving Division. Of the above amount expended for maintaining this shop, the following amounts were paid by the several divisions of the departments for painting carts, wagons, buggies, signs, etc.:

Paving Division	\$2,217 78
Sewer Division	940 49
Street Cleaning Division	783 09
Bridge Division	21 27
Street Watering Division	197 06
Central Office	215 54
County of Suffolk	85
	<u>\$4,376 08</u>

Leaving the balance, \$2,722.63, as the cost of this work for the Sanitary Division.

This shop employs seven painters and three helpers.

HARNESS SHOP.

Cost to maintain \$5,057.52, of which amount, \$3,178.46 was expended for labor, and \$1,879.06 on stock; part of the work sent to the blacksmith and wheelwright shops was also repaired here, such as Goddard and Concord buggies, leather seats for wagons, etc., together with all the new pieces of harness made for the several divisions. The entire lot of old and new harness owned by the

Sanitary Division has, during the year, been overhauled, repaired and oiled at this shop. Of the above amount paid out for maintaining this shop the amounts charged to the several divisions of the department for work done were as follows:

Paving Division	\$219 39
Sewer Division	610 54
Street Cleaning Division	192 63
Bridge Division	15 28
Street Watering Division	27 69
Central Office	89 00
County of Suffolk	1 24
	<u>\$1,155 77</u>

Leaving balance, \$3,901.75, as the net cost of work done for the Sanitary Division.

This shop employs three harness-makers and one helper.

HORSESHOEING SHOPS.

Cost to maintain during the past year: South Yard, \$3,711.04; West Yard, \$2,213.79, of which amount, \$3,136.13 was expended for labor at South Yard, and \$1,751.02 at West Yard, and for stock at South Yard \$574.91, and for West Yard \$462.77. All of the horses at the South Yard, together with the Street Cleaning Division horses stabled there, as also some of the horses located in the different stables of this division, and of other divisions of this Department, are shod at these shops, and for which the several divisions were charged the following amounts:—

	South Yard.	West Yard.
Paving Division.....	\$96 95	\$21 25
Sewer Division	586 05	302 75
Street Cleaning Division.....	992 70	801 32
Central Office.....	.....	160 75
County of Suffolk.....	.....	115 50
Bridge Division.....	.....	14 75
	<u>\$1,675 70</u>	<u>\$1,416 32</u>

Leaving balance of \$2,035.34, South Yard, as the cost to the Sanitary Division for this class of work.

Leaving balance of \$797.47, West Yard, as the cost to the Sanitary Division for this class of work.

These shops employ three horseshoers at South Yard and two at West Yard.

Cost of Horseshoeing.

	Division Shops.	Outside Shops.
Stock.....	\$1,037 68	
Labor.....	4,887 15	
	<u>\$5,924 83</u>	<u>\$1,026 39</u>

KIND AND STYLE.	DIVISIONS.						TOTAL.
	Sanitary Division.	Street Cleaning Division.	Sewer Division.	Paving Division.	Central Office.	County of Suffolk.	
New Shoes.....	6,003	3,094	1,112	309	280	200	10,998
Bar Shoes.....	59	16	27	2	.....	.....	104
Resets.....	925	269	222	41	29	18	1,504
Leathers	1,930	1,033	346	144	69	31	3,553

-Average cost per shoe, 43 cents. West Yard, average cost per shoe, 44 cents. South Yard, average cost per shoe, 42 cents.

Table showing the amounts paid for the Different Kinds and Character of Work Performed by the Sanitary Division, by the Several Other Divisions of the Street Department, and Others.

	Paving Division.	Sewer Division.	Street Cleaning Division.	Bridge Division.	Street Watering Division.	Central Office.	County of Suffolk.	Totals.
Blacksmith work	\$1,488 73	\$1,500 63	\$28 13	\$58 83	\$112 66	\$328 87	.....	\$3,517 85
Wheelwright work	2,643 62	1,229 86	45 16	28 64	84 11	177 60	\$4 80	4,213 79
Harness work	2,219 39	610 54	192 63	15 28	27 69	89 00	1 24	1,155 77
Painting	2,217 78	940 49	783 09	21 27	197 06	215 54	85	4,376 08
Horseshoeing	118 20	888 80	1,794 02	14 75	.....	160 75	115 50	3,092 02
Use of dumping boats .....	.....	482 05	4,148 70	.....	.....	.....	.....	4,630 75
Hay and grain, board of horses	25 38	36 66	5,868 60	.....	.....	.....	792 88	6,723 52
Yard and stable labor	16 92	27 40	2,182 02	.....	.....	.....	207 76	2,434 10
Fuel and lights at stable .....	.....	.....	194 23	.....	.....	.....	19 78	214 01
Water at stables .....	.....	.....	141 42	.....	.....	.....	19 78	161 20
Horses .....	.....	125 00	.....	.....	.....	.....	.....	125 00
Veterinary and medicines	8 46	9 26	1 41	.....	.....	.....	.....	19 13
Incidentals .....	.....	.....	133 46	.....	.....	.....	.....	153 26
Totals	\$6,738 48	\$5,850 69	\$15,512 87	\$138 77	\$421 52	\$971 76	\$1,182 39	\$30,816 48

Table showing the Number and Variety of Vehicles, etc., belonging to the Several Divisions of the Street Department, on which Repairs were made at the Wheelwright Shop by the Mechanics of the Sanitary Division.

From January 29, 1897, to January 27, 1898.

KIND.	DIVISIONS.							Total.
	Paving.	Sewer.	Sanitary.	Bridge.	Street Watering.	Central Office.	City Architect.	
Carts.....	18	1	257	.....	.....	.....	.....	276
Half-moon iron carts.....	.....	4	.....	.....	.....	.....	.....	4
Market wagons.....	.....	.....	8	.....	.....	.....	.....	8
Street watering carts.....	4	.....	.....	.....	4	.....	.....	8
Offal wagons .....	.....	.....	70	.....	.....	.....	.....	70
Goddard buggies.....	7	18	4	.....	1	.....	1	31
Box buggies.....	2	2	4	.....	1	3	.....	12
Concord buggies	10	5	17	4	.....	.....	.....	36
Corning buggies.....	.....	3	.....	.....	.....	1	.....	4
Stanhope buggies .....	.....	1	.....	.....	.....	2	.....	3
Two-seated wagons .....	.....	1	1	.....	.....	.....	.....	2
Double jiggers.....	2	.....	.....	.....	.....	.....	.....	2
Single jiggers.....	2	.....	.....	.....	.....	.....	.....	2
Sleighs.....	3	.....	.....	.....	.....	.....	.....	3
Double tip carts.....	2	.....	.....	.....	.....	.....	.....	2
Two-horse offal wagons .....	.....	.....	3	.....	.....	.....	.....	3
Offal sleds .....	.....	.....	1	.....	.....	.....	.....	1
Iron offal carts .....	.....	.....	13	.....	.....	.....	.....	13
Express wagons.....	6	17	6	5	.....	.....	.....	34
Double runner pungs .....	.....	1	.....	.....	.....	.....	.....	1
Gully cleaner (automatic).....	.....	1	.....	.....	.....	.....	.....	1
Top buggy.....	.....	1	.....	.....	.....	.....	.....	1
Two-horse cesspool wagon.....	.....	1	.....	.....	.....	.....	.....	1
Iron tip carts	1	1	.....	.....	.....	.....	.....	2
Two-horse stone wagon	1	.....	.....	.....	.....	.....	.....	1
Steam rollers	3	.....	.....	.....	.....	.....	.....	3
Total	61	57	384	9	6	6	1	524

Table showing the Number and Variety of Vehicles, etc., belonging to the Several Divisions of the Street Department, on which Repairs were made at the Blacksmith Shop by the Mechanics of the Sanitary Division.

From January 29, 1897, to January 27, 1898.

KIND.	DIVISIONS.								Total.
	Paving.	Sewer.	Sanitary.	Street Cleaning.	Bridge.	Street Watering.	Central Office.	City Architect.	
Carts	27	4	385	1	.....	.....	.....	.....	417
Half-moon and iron carts ..	3	9	.....	.....	.....	.....	.....	.....	12
Market wagons .....	.....	.....	13	.....	.....	.....	.....	.....	13
Street watering carts	4	.....	.....	.....	.....	9	.....	.....	13
Offal wagons.....	.....	.....	206	.....	.....	.....	.....	.....	206
Goddard buggies	12	17	13	.....	.....	1	8	1	52
Box buggies	1	2	8	.....	.....	3	2	.....	16
Concord buggies.....	21	28	25	1	7	1	1	.....	84
Corning buggies.....	.....	3	.....	.....	.....	.....	1	.....	4
Stanhope buggies.....	.....	4	.....	.....	.....	.....	2	.....	6
Carryalls.....	.....	.....	1	.....	.....	.....	.....	.....	1
Express wagons	8	23	9	1	7	.....	.....	.....	48
Two-seated wagons.....	.....	2	1	.....	.....	.....	.....	.....	3
Cesspool wagons.....	3	10	.....	.....	.....	.....	.....	.....	13
Two-wheel stone trucks	3	.....	.....	.....	.....	.....	.....	.....	3
Jiggers.....	4	.....	.....	.....	.....	.....	.....	.....	4
Sleds .....	.....	.....	21	.....	.....	.....	.....	.....	21
Sleighs	4	1	1	1	1	.....	1	.....	9
Double runner pungs.....	.....	2	.....	.....	.....	.....	.....	.....	2
Gully cleaners (automatic).....	.....	5	.....	.....	.....	.....	.....	.....	5
Stone wagons.....	1	.....	.....	.....	.....	.....	.....	.....	1
Total	91	110	683	4	15	14	15	1	933

Table showing the Number and Variety of Vehicles, etc., belonging to the Several Divisions of the Street Department, on which Work was performed at the Paint Shop by the Mechanics of the Sanitary Division.

From January 29, 1897, to January 27, 1898.

KIND.	DIVISIONS.							Total.
	Paving.	Sewer.	Sanitary.	Street Cleaning.	Bridge.	Street Watering.	Central Office.	
Carts.....	18	1	241	44	.....	.....	.....	304
Half-moon iron carts.....	.....	4	.....	.....	.....	.....	.....	4
Market wagons.....	.....	.....	5	.....	.....	.....	.....	5
Street watering carts.....	3	.....	.....	5	.....	7	.....	15
Offal wagons.....	.....	.....	122	.....	.....	.....	.....	122
Goddard buggies.....	8	19	7	2	.....	1	5	42
Box buggies.....	3	3	5	3	.....	2	1	17
Concord buggies.....	16	9	19	3	7	1	1	56
Express wagons.....	8	15	5	.....	6	.....	.....	34
Two-seated wagons.....	.....	1	2	.....	.....	.....	.....	3
Two-horse cesspool wagons.....	.....	6	.....	.....	.....	.....	.....	6
Two-wheel stone trucks.....	4	.....	.....	.....	.....	.....	.....	4
Sweeping machines.....	.....	.....	.....	18	.....	.....	.....	18
Jiggers.....	3	.....	.....	.....	.....	.....	.....	3
Sleds.....	.....	.....	20	.....	.....	.....	.....	20
Sleighs.....	4	1	1	1	.....	.....	.....	7
Double runner pungs.....	.....	1	1	.....	.....	.....	.....	2
Tubs for push carts.....	.....	.....	.....	60	.....	.....	.....	60
Stables.....	.....	.....	1	.....	.....	.....	.....	1
Offices inside.....	.....	.....	1	.....	.....	.....	.....	1
Buildings.....	.....	.....	2	.....	.....	.....	.....	2
Signs.....	1,154	15	9	8	.....	.....	.....	1,186
Sign posts.....	139	.....	.....	.....	.....	.....	.....	139
One tenement, 6 rooms and halls..	.....	.....	1	.....	.....	.....	.....	1
Total.....	1,360	75	442	144	13	11	7	2,052

Repairs and Alterations on Buildings, etc., made by Mechanics of the
Wheelwright Shop.

	Cost of Material used.	Cost of Labor.
South End Yard.....	\$73 00	\$266 22
Swill-house.....	52 15	42 82
West End Yard.....	97 88	174 88
Highland Yard	20 53	90 10
City Scales .....	.....	61 25
Fort Hill Wharf	146 71	223 01
Repairing fences	17 50	2 89
Making tail boards.....	17 74	45 60
Repairing cart wheels.....	5 90	18 00
Making shafts .....	.....	13 00
Making hames.....	3 40	11 00
Making three boxes for Central Office ..	10 50	5 58
Total	\$445 31	\$954 35

Signs for Paving Division.

	Number of Signs.	Cost of Stock.	Cost of Labor.
Double face signs	225	\$54 00	\$69 75
Single face signs	357	85 68	92 82
Lawn signs	2	9 40	2 38
T special signs	28	140 28	33 32
Suburban signs.....	94	137 24	69 56
Shaw patent signs.....	77	200 20	77 66
No passing through	36	5 40	5 40
Shaw patent three corner signs ..	3	7 80	2 94
Steam roller at work	6	7 80	7 20
Private way.....	24	6 24	1 44
Totals	852	\$654 04	\$362 47

NUMBER OF SIGNS PAINTED AND DELIVERED SINCE JANUARY 7, 1897.

427	Black and Gold, Street Signs (single face).
258	" " " " (double face).
9	" " " Ward and Street Signs (single face).
50	" " " Private Way Signs. Dangerous passing.
132	" " " White " " " " " "
5	" " " Gold, Shaw Patent Signs (three sides).
97	" " " " " " (four sides).
9	Special Shaw Patent (four sides) Indicators. Different language.
1	Black and White Large Sign. Sanitary and Street Cleaning Division 10.
3	Black and White Signs for scales, public weigher. (Sanitary.)
5	" " " " " stable (positively no smoking), Street Cleaning.
1	Varnish finish Sign, Street Cleaning Office.
148	Black and White Signs, No passing through. (Paving.)
15	" " " " " " " (Sewer.)
2	" " " " " for stable. (Sanitary.—Street Cleaning.)
12	Signs. No trespassing. (Paving.)
1	Large Sign. No thoroughfare. (Paving.)
6	Signs, Steam-roller at work. No passing. (Paving.)
5	" " No dumping. (Sanitary.)
19	T Special Posts, Two coats of paint. Lead and Black.
20	Lawn " " " " " " " "
100	Suburban " " " " " " " "

 139

 1,186

Table showing the Number of Articles and the Variety of Work Performed for the Several Divisions of the Street Department at the Harness Shop of the Sanitary Division.

KINDS.	DIVISIONS.								Total.
	Paving.	Sewer.	Sanitary.	Street Cleaning.	Bridge.	Street Watering.	Central Office.	City Architect.	
Harness and parts of harness repaired	3	63	552	137	.....	10	13	.....	778
New parts harness made ..	.....	.....	174	21	.....	1	1	.....	197
New harness made .....	.....	.....	1	.....	.....	.....	.....	.....	1
Concord buggies repaired,	10	13	22	4	3	.....	.....	.....	52
Goddard buggies repaired,	7	16	5	2	.....	1	11	1	43
Box buggies repaired.....	3	3	6	3	.....	2	2	.....	19
Sleighs repaired	2	.....	2	1	.....	.....	.....	.....	5
Water carts repaired	1	.....	.....	.....	.....	6	.....	.....	7
Express wagons repaired,	7	20	4	.....	3	.....	.....	.....	34
Horses numbered	9	14	43	12	2	1	1	.....	82
Horse tags lost.....	2	.....	4	1	.....	.....	.....	.....	7
Saddle pads made .....	.....	1	142	3	.....	.....	.....	.....	146
Collar pads made.....	.....	.....	72	4	.....	.....	.....	.....	76
Sweat collars made .....	.....	1	73	6	.....	.....	.....	.....	80
Poultice boots made .....	.....	1	25	.....	.....	1	1	.....	28
Muzzles made .....	.....	.....	1	.....	.....	.....	.....	.....	1
Carpet blankets made .....	.....	.....	44	.....	.....	.....	.....	.....	44
Buffalo robes repaired ....	.....	4	2	1	.....	1	2	.....	10
Carriage washers cut	8	12	8	.....	.....	.....	12	.....	40
Whips repaired.....	1	2	.....	.....	.....	1	1	.....	5
Calking boots made.....	.....	.....	1	.....	.....	.....	4	.....	5
Two-seated wagon repaired .....	.....	1	1	.....	.....	.....	.....	.....	2
Cushion for office chair ...	.....	1	1	.....	.....	.....	.....	.....	2
New halters made.....	.....	.....	37	1	.....	.....	.....	.....	38
Boot for Concord buggy made .....	.....	1	.....	.....	.....	.....	.....	.....	1
Blankets repaired.....	.....	9	5	.....	.....	3	.....	.....	17
Hooks for swill wagon covers .....	.....	.....	7	.....	.....	.....	.....	.....	7
<i>Carried forward.....</i>	53	162	1,232	196	8	27	48	1	1,727

Table showing the Number of Articles, Variety of Work, etc.— *Concluded.*

KINDS.	DIVISIONS.								Total.
	Paving.	Sewer.	Sanitary.	Street Cleaning.	Bridge.	Street Watering.	Central Office.	City Architect.	
<i>Brought forward.....</i>	53	162	1,232	196	8	27	48	1	1,727
Interfering boots made....	.....	.....	3	1	.....	.....	.....	.....	4
Wagon shade covered.....	1	.....	.....	.....	.....	.....	.....	.....	1
Dust covers made and re- paired.....	.....	.....	80	.....	.....	.....	.....	.....	80
Cart covers repaired.....	.....	.....	128	.....	.....	.....	.....	.....	128
Carriage boot repaired....	1	.....	.....	.....	.....	.....	.....	.....	1
Desks repaired	1	.....	1	.....	.....	.....	.....	.....	2
Leather seats for tip carts made.....	.....	3	.....	.....	.....	.....	.....	.....	3
Baggage straps made.....	.....	2	.....	.....	.....	.....	.....	.....	2
Weight straps made .....	.....	1	4	.....	.....	.....	.....	.....	5
Single hame straps made,	.....	4	171	.....	.....	.....	.....	.....	175
Leathers for oil covers made .....	.....	.....	36	.....	.....	.....	.....	.....	36
Hames blackened and oiled .....	.....	.....	41	.....	.....	.....	.....	.....	41
Oil covers repaired .....	.....	.....	9	.....	.....	.....	.....	.....	9
Double hame straps made,	.....	.....	155	9	.....	.....	.....	.....	164
Carriage covers made .....	.....	.....	2	.....	.....	.....	.....	.....	2
Blacksmith bellows re- paired.....	.....	.....	.....	1	.....	.....	.....	.....	1
Leather weight box made..	.....	.....	.....	1	.....	.....	1	.....	2
Total	56	172	1,862	208	8	27	49	1	2,383

Hay and Grain.
Account of Hay, Grain and Straw Fed Out and Used from February 1, 1897, to February 1, 1898.

YARDS.	MATERIAL.	Bales.	Bushels.	Pounds.	Total Cost.	Cost per Horse per Day.	Lbs. per Horse per Day.	Horses. Divisions: Sanitary. Street Cleaning.
South-yard Stable.	Hay	2,547		548,243	\$4,386 78	\$0.11	141,181	30,002 *7,931 37,933
	Oats .....	.....	17,985	575,520	5,438 38	.14	15,593	
	Shorts			12,900	103 50		2,715	Average per day. 82 37
	Straw	382	.....	83,017	648 33	.01	23,593	
	Corn .....	.....	1,643	92,008	641 84	.01	23,593	
	Carrots .....	.....	.....	4,335	24 93	.....	3,035	
	Salt .....	.....	.....	1,080	3 30	.....	3,753	
Totals.....	English Vegetable Food, 17 bbls.				255 00			
		2,929	19,628	1,317,103	\$11,502 06	\$0.30	34,753	
West-yard Stable.	Hay	2,039		431,822	\$3,457 95	\$0.14	181,982	14,821 *6,748 Supt. of Sts. Pur. Agent. 1,057 659
	Oats .....	.....	10,669	341,408	3,135 36	.13	141,116	
	Shorts			4,500	35 45		2,328	Average per day. 41 31
	Straw	243	.....	53,449	444 75	.01	23,285	
	Corn .....	.....	.....	.....	.....	.....	.....	
	Carrots .....	.....	.....	2,990	17 19	.....	2,990	
	Salt .....	.....	.....	190	75	.....	150	
Totals.....	English Vegetable Food, 14 bbls.				210 00			Supt. of Sts. Pur. Agent. 5 2
	.....	2,282	10,669	834,359	\$7,301 45	\$0.31	35,193	

*The Street Cleaning Division commenced to feed their own horses at these yards September 8, 1897.

Hay and Grain. — Continued.

Account of Hay, Grain and Straw Fed Out and Used from February 1, 1897, to February 1, 1898.

YARDS.	MATERIAL.	Bales.	Bushels.	Pounds.	Total Cost.	Cost per Horse per Day.	Lbs. per Horse per Day.	Horses. Divisions: Sanitary. Street Cleaning.
Highland-yard Stable.	Hay.....	1,268	.....	271,708	\$2,181 73	\$0.12 577	141,846	
	Oats.....	.....	8,219	263,012	2,477 40	.13 18133	141,813	16,432 1,701
	Shorts.....	.....	.....	12,200	96 30	.06309	14,813	18,133
	Straw.....	336	.....	73,882	537 30	.02 18133	41,813	
	Corn.....	.....	75	4,200	32 62	.32522	42,000	
	Salt.....	.....	.....	1,600	9 20	.18133	18133	Average per day. 45 5
Totals.....	Carrots.....	.....	.....	.....	.....	.....	.....	
	English Vegetable Food, 12½ bbls. ..	.....	.....	.....	202 50	.01 2117	18133	
						\$0.30 3715	341,080	
Charlestown- yard Stable.	Hay.....	962	.....	188,833	\$1,505 26	\$0.174088	21,339	
	Oats.....	.....	4,125	132,000	1,206 75	.14 8914	15,814	5,737 2,877
	Shorts.....	.....	.....	2,200	15 58	.0758	22,000	8,614
	Straw.....	97	.....	21,276	180 44	.02 8614	23,011	
	Corn.....	.....	.....	.....	.....	.....	.....	Average per day. 16 8
	Carrots.....	.....	.....	2,375	13 66	.0814	23,011	
Totals.....	Salt.....	.....	.....	.....	112 50	.012636	.....	
	English Vegetable Food, 7½ bbls. ..	.....	.....	.....	\$3,034 19	\$0.35 1329	40,124	

Hay and Grain.—*Concluded.*
Account of Hay, Grain and Straw Fed Out and Used from February 1, 1897, to February 1, 1898.

YARDS.	MATERIAL.	Bales.	Bushels.	Pounds.	Total Cost.	Cost per Horse per Day.	Lbs. per Horse per Day.	Horses. Divisions: Sanitary. Street Cleaning.
South Boston Stable.	Hay.....	495	.....	109,356	\$894 67	\$0.16 ²⁰³ ₅₅₇₉	19 ³⁸⁵⁰ ₅₅₇₉	5,579
	Oats.....	.....	2,580	82,560	789 40	.14 ⁵⁵⁷⁹ ₅₅₇₉	14 ⁵⁵⁷⁹ ₅₅₇₉	—
	Shorts.....	.....	.....	2,350	19 42	.00 ⁵⁵⁷⁹ ₅₅₇₉	2 ⁵⁵⁷⁹ ₅₅₇₉	—
	Straw.....	28	.....	5,950	50 24	.00 ⁵⁵⁷⁹ ₅₅₇₉	1 ⁵⁵⁷⁹ ₅₅₇₉	Average per day.
	Corn.....	.....	.....	.....	.....	.....	.....	15
	Carrots.....	.....	.....	.....	.....	.....	.....	—
	Salt.....	.....	.....	2 20	1 20	.00 ⁵⁵⁷⁹ ₅₅₇₉	.....	—
	English Vegetable Food, 5½ bbls....	.....	.....	.....	82 50	.01 ⁵⁵⁷⁹ ₅₅₇₉	.....	—
	Totals.....	523	2,580	200,436	\$1,837 43	\$0.32 ⁵⁵⁷⁹ ₅₅₇₉	35 ⁵⁵⁷⁹ ₅₅₇₉	—

Recapitulation.

MATERIAL.	Pounds.	Cost.	HORSES PER DAY.		Number of Horses Fed.
			Cost.	Fed out, Pounds.	
Hay.....	1,549,962	\$12,426 39	\$0.13	16,332,554	Sanitary Division, 72,571
Oats.....	1,394,500	13,047 29	.13	14,333,257	Street Cleaning Division, 19,257
Shorts.....	34,150	270 25		334,100	Superintendent of Streets, 1,057
Straw.....	237,574	1,801 06	.01	2,303,111	Purchasing Agent, horses
Corn.....	96,208	674 46		1,266,411	purchased but not assigned, 659
Carrots.....	11,300	64 98		113,000	
Salt.....	1,490	5 25		93,544	
English Vegetable Food, 57½ bbls.		802 50		.....	
Totals.....	3,325,184	\$29,212 18	\$0.3121354	35,311,444	Average per day: Sanitary Division, 199 Street Cleaning, 81 Superintendent of Streets, 5 Purchasing Agent, horses purchased but not assigned, 2 Total, 287

72,571 Sanitary horses (average number per day).....	199	} at \$.3121354 = {	\$22,662 67
19,257 Street Cleaning horses (average number per day).....	81		6,013 63
1,057 Superintendent of Streets horses (average number per day).....	5		330 08
659 unassigned horses (average number per day).....	2		205 80
93,544 horses (average number per day).....	287		\$29,212 18

PLANT AND PROPERTY IN CHARGE OF THE SANITARY DIVISION.

South City Stables, Shops and Sheds.

Situated on Albany street, opposite Newton street. The lot belonged to the city before being used for this purpose, and contains 90,780 feet.

The stable and buildings connected therewith are of brick. There are also on the premises five wooden sheds, used for storing wagons, etc. The stable is two stories high, with French roof, and has accommodations for 100 horses. Twenty-three horses are kept in sheds. Total original cost, exclusive of land, \$79,089.23.

Connected with stables are blacksmith, wheelwright, paint and harness-makers' shops, in which the wagons, carts, harnesses, etc., used by the department are constructed and kept in repair; also a horseshoeing shop for shoeing the horses of the department located in this section of the city.

Offal Depots.

Erected in 1864, on the wharf fronting on Albany street, opposite Brookline street, on the other side of the dock from that used by the Paving Division. The lot which the building occupies and the yard attached to the same contains 39,511 feet, and belonged to the city before being used for this purpose. Total original cost of building \$18,578.89. This building is used for the deposit of house-offal daily collected in the city carts, and from which it is thence conveyed without the city limits by purchasers.

West Stable and Sheds.

The stable is a brick building, a story and a half high, 128 feet by 50, located on North Grove street, built in 1860, with suitable out-buildings attached to the same. It has accommodations for 83 horses, in stables and sheds. The lot contains about 45,152 square feet. On May 11, 1896, a horseshoeing shop was established for the purpose of shoeing the horses of the department stabled in this section of the city.

Highland Stable.

With accommodations for 72 horses, on the old Almshouse lot, Highland street, containing 81,082 square feet. A part of this stable and adjoining lot is used by the Paving Division. There is on this lot a brick stable, which cost \$88,594.13. On this lot is an offal-shed, erected in 1875, at a cost of \$1,160.12.

During the year the stabling of horses in the basement of this building was abandoned and 15 stalls were placed in the second story of the building at a cost of \$3,000. April 1, 1897, the offal-shed erected in 1875 was abandoned, and renovated for the purpose of storing wagons and carts.

Charlestown Stable.

With accommodations for 25 horses, is situated on Rutherford avenue; lot contains 17,300 square feet of land; stable built in 1875, cost \$5,083.07; sheds and out-buildings built in 1879.

Fort Hill Wharf.

Containing 21,054 square feet, placed in charge of the Sanitary Division, used as a dumping station for the city's garbage and refuse, and as a landing place for scows, which convey this stuff to sea. There are two dumping-boats, known as the Barney dumping-scows, and these are in continual use for the above purpose, and are towed to sea by the Street Department steam tug boat "Cormorant." The tug boat is also used by the Sewer Division.

A portion of this wharf is used by the Street Cleaning Division as a locker for push patrol-carts, etc.; a part is in charge of the Paving Division, and a portion occupied by a tenant.

Gibson Street Plant.

Containing 42,000 square feet, and situated in Dorchester district, which has been used and occupied by the New England Construction Company for the treatment and disposition of offal, and which is now closed.

On September 3, 1897, the Street Cleaning Division commenced to feed and care for the horses belonging to that Division, and stabled at 650 Albany street and North Grove street.

The Sanitary Division still cares for the horses of this Division located at Rutherford avenue and Highland street, bearing a proportionate share of the cost of maintaining both of these stables.

All of the stables and sheds under the charge of this Division need thorough repairs, no extensive repairs having been made for years, and a special appropriation for this purpose should be granted by the City Council.

Number of Carts and Wagons Collecting House-dirt and Ashes and Offal.

Offal wagons in use by the Sanitary Division	104	
" " " " " Thomas Mulligan, East Boston	6	
" " " " " David B. Morrill, Brighton	3	
" " " " " John Bradley, Dorchester	6	
" " " " " G. T. Barnes, West Roxbury	3	
		122
Ash carts in use by the Sanitary Division	172	
" " " " " Wm. F. Hedrington, East Boston	6	
" " " " " J. J. Moore, West Roxbury	3	
" " " " " John McShane, Dorchester	5	
" " " " " Denis Flynn, Dorchester	5	
Market wagons owned by the Sanitary Division	12	
		203
Total		325

ORGANIZATION.

1 deputy superintendent.	5 feeders.
5 clerks.	6 messengers.
7 foremen.	9 stablemen.
1 captain of scows.	9 yardmen.
11 sub-foremen.	25 dumpers.
15 inspectors.	4 dumping-boat men.
32 mechanics.	214 ash-cart drivers and helpers.
3 tallymen or aids.	138 offal-cart drivers and helpers.
5 watchmen.	

Total, 490 employees.

APPENDIX E.

REPORT OF THE DEPUTY SUPERINTENDENT OF
THE SEWER DIVISION.

30 TREMONT STREET,
BOSTON, February 1, 1898.

MR. BENJAMIN W. WELLS,
Superintendent of Streets:

DEAR SIR: I respectfully submit report of the expenses, income and operations of the Sewer Division for the financial year ending January 31, 1898.

Yours truly,

CHARLES R. CUTTER,
Deputy Superintendent.

The Sewer Division has charge of the following work:

1. Construction and maintenance of all sewers and catch-basins.
2. Completion and maintenance of the Main Drainage Works.
3. Construction and maintenance of the channels of Stony brook.
4. Construction and maintenance of street culverts and surface drains.
5. Preparation of plans and the engineering and supervision required in the construction and maintenance of all work connected with the division.
6. Investigation of complaints in regard to defective sewerage and surface drainage.
7. Granting of permits for all connections to be made with the common sewers, and the custody of bonds filed by drain layers authorized to make such connections.
8. Levying of assessments on estates benefited by the construction of sewers.

The following table shows the maintenance appropriation of this division for the past ten (10) years :

1888	.	.	.	.	.	\$261,361 00
1889	.	.	.	.	.	268,230 00
1890	.	.	.	.	.	347,000 00
1891	.	.	.	.	.	350,000 00
1892	.	.	.	.	.	350,000 00
1893	.	.	.	.	.	350,000 00
1894	.	.	.	.	.	320,000 00
1895	.	.	.	.	.	300,000 00
1896	.	.	.	.	.	280,000 00
1897	.	.	.	.	.	300,000 00

A general statement of the work done during 1897, and work necessary to be done, is given in the succeeding pages :

SOUTH BOSTON.

During the past year B and Seventh-streets overflow, the sewer in Dorchester avenue, between B and D streets, and the sewer in Dorr street have been completed.

The sewers in the following streets should be attended to in the immediate future :

B street, between Dorchester avenue and Fourth street, Dorchester avenue, between D and Dorchester streets, D street, between Dorchester avenue and Eighth street and Dexter and Ellery streets. The Mercer-street sewer should be enlarged, and a beginning made on the Kemp-street outlet, and as much of this as lies in the proposed location of Columbia road will have to be built immediately.

Sewers in the following streets should receive attention during the coming year :

From D street to B street, Silver street from B to Dorchester streets, Bolton street from B to Dorchester streets. Although there are many others in poor condition which should be rebuilt, those above mentioned are the most troublesome.

CHARLESTOWN AND EAST BOSTON.

The work on the connections with the North Metropolitan sewer in Charlestown and East Boston should be continued and completed during this coming year.

The building of a new outlet of ample dimensions to relieve the territory in the vicinity of Tibbetts town way, the rebuilding of the Beach-street outlet and sewer in Cambridge street (which should be done previous to the raising of the grade of Cambridge street) and the rebuilding of the Rutherford-avenue sewer will constitute the work in Charlestown.

In East Boston the rebuilding of the Porter street and Putnam street outlets should be attended to this year.

During the past year the following connections with the Metropolitan sewer have been made in Charlestown :

Chelsea street at Vine street, Chelsea street at Medford street, Rutherford avenue near Miller street; the Rutherford-avenue sewer from outlet near Miller street to Chapman street has been rebuilt to proper size, replacing an old broken-down sewer.

The connections which have been made during the past year in East Boston are: Marginal street at Ruth street, Marginal street at Cottage street, Porter street at Bremen street, Border street at Eutaw street, Border street at Lexington street, Border street near Decatur street, Sumner street at New street, Cottage street at Maverick street, Lamson street at Maverick street, Jeffries street at Maverick street, Sumner street at Jeffries street.

BRIGHTON.

The sewer for Cambridge street, between Seattle and North Harvard streets, has been built, and the remainder, between Seattle street and the Charles river, started. This sewer will be completed early in the coming year. Sewers have also been built in Strathmore road, Sidlaw road, between Commonwealth avenue and Chiswick road, Chiswick road, between Sidlaw road and Chestnut Hill avenue, Washington street, between Nantasket avenue and Commonwealth avenue. Commonwealth-avenue outlet, between Lake street and Commonwealth avenue, was finished this year. One of the most important undertakings in Brighton this coming year will be the sewerage of the Aberdeen district, which should be sewerage on the separate system; both house sewers and surface drains being built at the same time, inasmuch as the house sewer will have to find an outlet through the Brookline system, which is, in this neighborhood, a strictly separate system.

WEST ROXBURY.

In the Mt. Hope district 8,113 linear feet of pipe sewers on the separate system have been built. During the coming year the system should be completed by the building of the surface drains and improvement of the brick channels which traverse this district. The Perkins-street sewer, between Jamaica way and Centre street, has been completed.

In the neighborhood of West Roxbury and Spring-street stations and the New York, New Haven & Hartford Railroad there are large areas which have for a long time been partially developed. It is probable that during the coming year a large amount of sewer building will be done in this part of West Roxbury, owing to the completion of the Neponset-valley Metropolitan sewer through this territory. These sewers will be on a strictly separate system, and will require long outlets, varying from 2,500 feet to 7,000 feet in length.

This work should be undertaken and carried on as rapidly as possible, as the cesspools from the houses now drain in the neighborhood of the Brookline pumping-station.

The proposed abolition of grade crossings at Roslindale and Spring-street stations will necessitate some changes in the surface-drainage system at these points, and at the former point will allow proper development of the sewer system for the Hewlett-street district, which has been held back on account of these proposed changes.

DORCHESTER.

In the Forest-avenue and Lauriat-avenue districts the following streets and parts of streets have been sewered :

Evans street, the southerly end of Nelson street, the southerly end of Fuller street, Fairmount street, and parts of Capen, Selden and Morton streets, Lauriat avenue, Chapman avenue, Birch street, Oak terrace, Mountain avenue, Dumas street, Mascot avenue, Willowwood street, a part of Ballou avenue, Rosseter street and outlets.

The following streets remain to be sewered, and should be attended to the coming year :

Corbet street, Hopkins and Dyer streets, the southerly ends of Selden and Fuller streets, the northerly end of Nelson street, Norfolk and Maxwell streets, the remainder of Morton street, West Selden street, Carlos and Don streets, part of Lauriat avenue near the railroad station, Lauriat street, Tucker street, Lyons street, Jones avenue, Middleton avenue, remainder of Ballou avenue and Morton street, and a part of Norfolk street.

In the Dorchester Lower Mills village the following streets are well settled, and should be provided with sewers :

Monson street, River street, part of Temple and Morton streets, part of Dorchester avenue, Bellows place, Idaho street, Avondale place, part of Codman street and Cedar street.

In the neighborhood of Talbot avenue the following streets remain to be sewered :

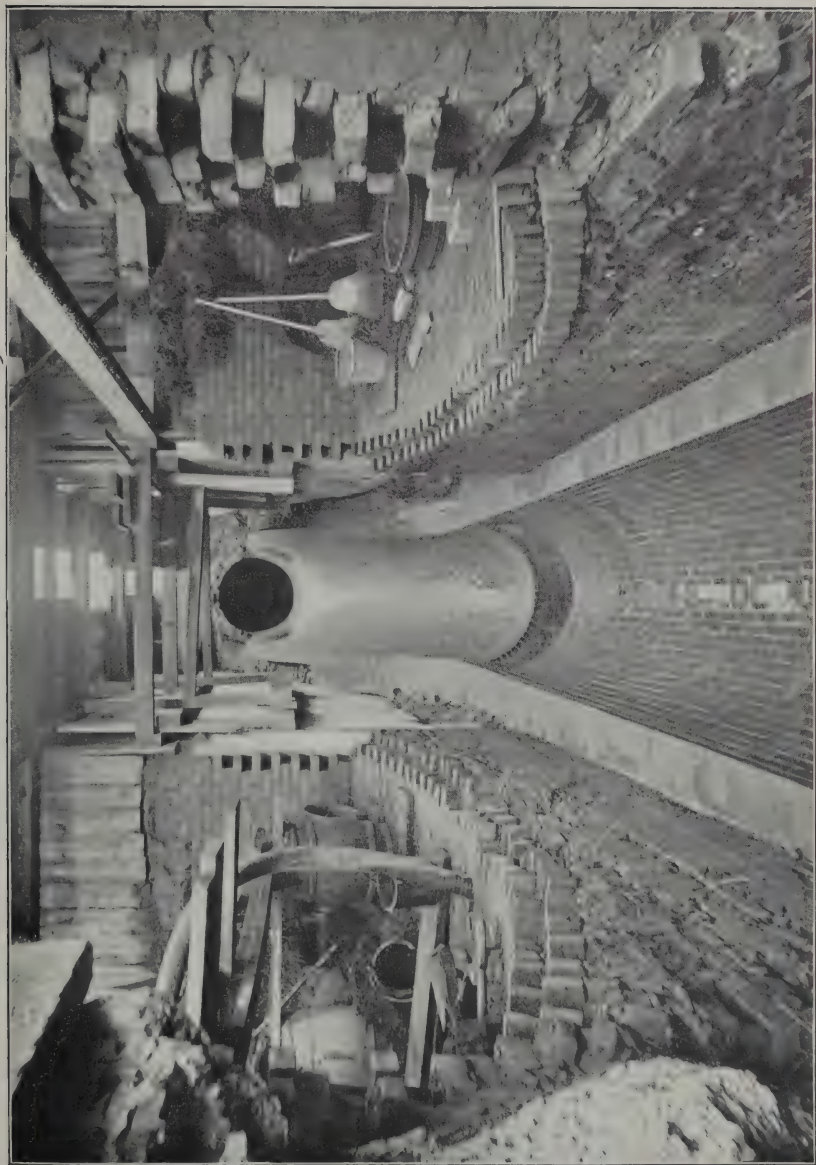
Bernard street, Spencer street, Millet street, Clarence place, Melbourne street, Wrentham park, Torrey street, Waterlow street, Peverell street and Hewins street.

In the northern part of Dorchester, work on the Columbia-road boulevard will be pushed to completion. A new sewer system will be constructed for the northern half of Savin Hill, including the portion of Savin Hill avenue between the railroad and Grampian way.

The Rosemont and Mill streets main sewer will be carried on in connection with the building of the covered channel for the southern branch of Tenean brook.

ROXBURY.

About 2,100 feet of the West Roxbury low-level sewer has been built this year, and the sewer system on Columbus avenue, between the Roxbury crossing and Dimock street, is in progress, and will be completed at an early date. The Dorchester-brook sewer has been extended from Norfolk avenue to Clifton street.



DORCHESTER INTERCEPTING SEWER—SIPHON UNDER TENEEAN CREEK CONDUIT.

In all probability no further construction will be necessary on this sewer for a number of years.

The long-needed rebuilding of Harrison avenue main sewer has been nearly completed this year, and the building of this sewer will enable the city to rectify the sewer system of the adjacent territory. Sewer systems have been built in Peterborough street and in Parker, Turner and Norway streets.

The coming year the sewer in Hemenway street, formerly Parker street, will have to be rebuilt between Norway street and the passageway south of Boylston street. This is a continuation of the work of last year, when this sewer was rebuilt from Westland avenue to Norway street. The building of this sewer will enable the city to rebuild the pipe-sewer in the before-mentioned passageway, which has been a source of endless trouble and annoyance. The sewer system of the proposed Ipswich street will be completed the coming year, and at its southerly end a connection will be made with the brick sewer in Boylston street, between Hemenway street and the Parkway. This latter sewer has settled so badly that a portion of it pitches the wrong way; but by making the proposed connection it will be drained out by the Ipswich-street sewer, and will not have to be rebuilt.

It is hoped that the division will be able to build the house-sewers, recommended in several previous reports, on the sides of the old Stony-brook channel, between Huntington avenue and Elmwood street, in connection with the rebuilding of this old channel.

The Muddy-river conduit in Brookline avenue should be repaired, and a considerable portion of it rebuilt. This will be a very expensive work. A surface-drain should be built in Heath street, between Huntington avenue and Lawn street.

When the Huntington-avenue boulevard was completed, this surface-drain was started and carried to the line of the avenue. It should be completed the coming year, as the Heath-street sewer is entirely inadequate to take the floods of surface-water which come down this street.

The sewer system in the new avenue called South Huntington avenue has been built on the separate system, in anticipation of the building of this surface-drain in Heath street, and the catch-basin drain on the new avenue has been connected temporarily with the sewer in Heath street, which, of course, increases the flood of water in the latter sewer.

The relief-sewer for the Notre Dame-street district will be completed the coming year. This sewer was carried up as far as the line of Columbus avenue at the relocation of Dimock street, and left there for the purpose of further extension when Columbus avenue was built.

This sewer will, when completed, relieve the Notre Dame-street district, which has suffered for many years from floods of surface-water. The sewer in Haskins and Benton streets will be

rebuilt, and the overflow or surface-drain for the Vila-street district should be built, if arrangements can be made with the Park Department for the location of the same, and also for paying a portion of the expense of building.

CITY PROPER.

The Canal-street relief sewer was begun last year in Central street and has been carried on through India and Commercial streets, and part way through Clinton street. This will be carried on the coming year, and probably completed to the connection with the Canal-street sewer, near Causeway street.

The route of this sewer, which was projected through Clinton and Blackstone streets and Haymarket square, has been changed on account of the fact that the Rapid Transit Commission have determined to build a subway in Hanover street. The grade of this subway will be so low that it will be necessary to build a siphon on the Canal-street relief sewer if it crosses Hanover street at Blackstone street.

The route has therefore been changed, and this sewer will be carried from Clinton street, through Fulton and Cross streets to Haymarket square, for the reason that at the point where Cross street crosses Hanover street the proposed grade of the subway is high enough to allow the sewer to be carried under it without siphoning.

Sewers have been built in Atlantic avenue, thus removing the pollution from the Mercantile Wharf and adjacent docks; in Charles and Allen streets, relieving the condition of the sewer system in Brighton and Allen streets, and in South Market street and many other small streets.

The Rapid Transit Commission, in connection with other work, have rebuilt sewers in Adams square, Beacon and School streets, Cornhill, Hanover street, Tremont street and Tremont row and Washington street.

The building of the South Union Station has resulted in a general remodelling of the sewer system in this part of the city. The sewers in Beach, East, Essex and Summer streets have been combined and a new outlet sewer built in Summer-street extension.

About 700 feet of the interceptor in Cove street has been rebuilt and carried around the head house of the station, and a very large sewer built from Cove street across the Terminal Company's land, a short distance north of Mt. Washington avenue, which is designed to take the sewage of Kneeland and Harvard streets districts. On account of the low grade at which the railroad subway is designed across Mt. Washington avenue, this sewer had to be very much depressed. The crown of the sewer being at Grade 3, and as there was not sufficient weight of material over the sewer to resist tidal pressure, a particular form of construction was adopted, the arch of the sewer



KNEELAND STREET SEWER — DRIVING SHEET PILING.

being held down by bent rails which are carried over the sewer and bolted down on each side of the sewer to the pile caps underneath.

Future Work in this District.

The most important work which is contemplated for the coming year in the city proper, is the completion of the terminal sewers before mentioned, and continuing the large sewer under the railroad yard up Kneeland and South streets from the interceptor to Harvard-street sewer.

A district regulator will also be built on the interceptor near Summer street, and a regulator in Kneeland street, near Cove street, connecting with the interceptor by a small brick sewer in Kneeland street. At the request of the Terminal Company a portion of the intercepting sewer near the location of the gas-holders at Federal-street bridge will be rebuilt, in order to enable the city to abandon the portion of the existing interceptor which crosses under the proposed location of the Terminal Company's subway at this point. The house sewer will be built in the new Dorchester avenue between Summer street and Mt. Washington avenue. In other parts of the city the North Market-street sewer and the sewers in India, Milk and adjoining streets are in bad condition and should be rebuilt.

In Commercial street, near Clark street, the sewer system is old and excessively leaky, and must be remodelled and probably entirely rebuilt, as the tide rises and falls freely in these sewers at the present time.

The Legal Grade of Cellars.

This subject has been discussed in the report of 1896, but attention should be called to it again on account of its importance. The present legal grade, according to the building law, is Grade 12.

This is evidently founded on the assumption that the ordinary run of high tides is, on the average, up to Grade 10. While this is true there are very many tides which go above this point, and even up to Grade 14. It is not at all uncommon for the tide to reach Grade 12 at the same time that a rain storm is in progress. This of course is hard to overcome in designing sewers.

A sewer should be, if possible, of such a size that it will carry off the storm water without allowing the level of the water to get above that of the cellars. This is a theoretical impossibility whenever the tide reaches Grade 12.

The only device which could be adopted to help matters under these circumstances, is to build the sewer much larger than would be needed simply to convey the storm water, so that it will take a little while to fill up this extra space. In other words the sewers must provide a storage space.

This requirement results in a large increase in the cost of all sewers in tidal districts. The legal grade should be raised to Grade 14.

There is another aspect to this problem of the legal grade of cellars and that is, that, as at present established, this grade bears no relation to the grade of the street in which the sewer lies. It really only applies in tidal districts, for it would be absurd to suppose that it was intended to allow cellars on high land, perhaps 50 or 100 feet above tide water, to be carried down to Grade 12, and to impose any obligations upon the city to drain cellars to such unusual depth.

In addition to changing the legal grade from 12 to 14, the ordinance should be amended so as to establish a relation between the grade of the street in which the sewer lies and the allowable depth of cellars. This would be best founded upon custom, and probably the depth of 8 feet below the grade of the street would cover all ordinary cases. If such a grade were established then a builder, who chose to put in a cellar of unusual depth, would understand that he could not expect to find the sewer system low enough to drain him by gravity, and that he must provide means for raising his sewage by some form of pumping.

Control of House Connection.

As the law stands at present this division supervises only the connection of private drains with the sewer, and has no control over the laying of the drain from the sewer to the house. The drain-layer may or may not make good work of this portion.

This makes a difference to this division in many cases where the work is in wet ground, as it allows a large amount of leakage from ground water to find its way into the sewer system. If a drain is improperly laid it also results in trouble to this division, because when a drain becomes stopped up a complaint almost invariably is made that the public sewer in the street is stopped up and the owner of the house refuses to go to any expense on his private drain until the fact is demonstrated to him that the public sewer is in good condition.

This division should either build all private connections by day labor, or should have supervision over them from the sewer to the point where the Superintendent of Plumbing, under the building law, assumes control.

In this connection it should be noted that the inspectors of this division should have the right to enter buildings in order to find out from what houses matter deleterious to the sewers is being emptied, and to make tests, etc. These inspectors, together with the engineers, who have to enter many buildings to get the grades of sewers, should be furnished with badges, in order to assure the occupants of the buildings that they are properly authorized agents of the city of Boston.

Main Drainage.

In connection with the main drainage works, contracts have been entered into for the enlarging of the sewage storage reservoirs at Moon Island, the capacity of the old ones having been fully reached. A considerable improvement has been brought about at the pumping-station at the Cow Pasture, contracts having been let for the thorough overhauling of the present machinery, and also a contract made with Mr. E. D. Leavitt to design the new 72,000,000 gallons sewage pump; and the coming year will bring about changes of great value in the main drainage system.

Stony Brook.

The construction of that portion of Stony-brook channel lying between the gate-house on Pynchon street and the channel built by the New York, New Haven and Hartford Railroad, near Centre street, has been continued and nearly completed.

Agreement as to the Use of Sewers of the City of Boston.

The Board of Metropolitan Sewerage Commissioners, constituted under the authority of chapter 439 of the Acts of the year 1889, acting for the Commonwealth, and the Mayor of the city of Boston, acting for said city, authorized thereto by chapter 502, of the Acts of the year 1897, make the following agreement, viz. :

ARTICLE 1. Said board shall connect the Charles-river Sewerage System for the disposal of the sewage of the Charles-river Sewerage District, consisting of the cities of Waltham and Newton and the towns of Watertown and Brookline and a part of the city of Boston, with the sewer of the city of Boston at the corner of Gainsborough street and Huntington avenue in said city of Boston, and shall connect the Neponset Sewerage System for the disposal of the sewage of the Neponset Sewerage District, consisting of the towns of Dedham, Hyde Park, Milton, Westwood and a part of the city of Boston, with the sewers of the city of Boston at Granite bridge.

ARTICLE 2. The city of Boston shall discharge the sewage from said systems through its sewers and other works into the water at Moon Island.

ARTICLE 3. The Commonwealth shall pay to the city of Boston, for the use authorized by said last-mentioned act, of said city's sewers and sewerage works by the Charles-river Sewerage District, and for the discharge by the city of Boston of the sewage from said Charles River Sewerage District through said city of Boston's sewers and sewerage works, as follows, to wit :

(a.) For the year 1896, and for the year 1897 (to be paid in the month of January, 1898) the sum of twenty-eight thousand and seven (28,007) dollars for each year in addition to the sum already paid for each year.

(b.) For the year 1898 (to be paid in the month of January, 1899) the sum of forty-one thousand five hundred and fifty-nine (41,559) dollars; for the year 1899 (to be paid in the month of January, 1900) the sum of forty-one thousand five hundred and fifty-nine (41,559) dollars; for the year 1900 (to be paid in the month of January, 1901) the sum of forty-one thousand five hundred and fifty-nine (41,559) dollars; each of said sums to be increased by the amount of seventy-four (74) per cent. of one-fifth of the interest paid by the city of Boston on the cost of construction of all said sewers and works forming a part of such portions of said city of Boston's system of sewage discharge and works lying between Gainsborough street and the point of discharge into the water at Moon Island, as shall have been constructed after October 1, 1897, and prior to the month of January in which the payment is to be made; *provided, however*, that no part of the cost of construction of any sewer or work hereafter constructed which said board and said Mayor shall agree, or in case they cannot agree, which a third person selected by said board and Mayor shall find, ought not to be paid by the Commonwealth, shall be used in determining any such amount.

ARTICLE 4. The Commonwealth shall pay to the city of Boston for the use authorized by said last-mentioned act of its sewers and sewerage works for the Neponset Sewerage District and for the discharge by the city of Boston of the sewage from said Neponset Sewerage District through said city of Boston's sewers and sewerage works as follows:

(a.) For the year 1898 (to be paid in the month of January, 1899) the sum of sixteen thousand three hundred and eleven (16,311) dollars; for the year 1899 (to be paid in the month of January, 1900) the sum of sixteen thousand three hundred and eleven (16,311) dollars; for the year 1900 (to be paid in the month of January, 1901) the sum of sixteen thousand three hundred and eleven (16,311) dollars; each of said sums to be increased by the amount of twenty-six (26) per cent. of the interest paid by the city of Boston on the cost of construction of all said sewers and works forming a part of such portions of said city of Boston's system of sewage discharge and works lying between Gainsborough street and the point of discharge into the water at Moon Island, as shall have been constructed after October 1, 1897, and prior to the month of January in which the payment is to be made; *provided, however*, that no part of the cost of construction of any sewer or work hereafter constructed which said board and said Mayor shall agree, or in case they cannot agree, which a third person selected by said board and Mayor shall find, ought not to be paid by the Commonwealth, shall be used in determining any such amount.

ARTICLE 5. The Commonwealth shall pay to the city of Boston for the year 1901, and for each and every year thereafter for the use aforesaid by each of said districts, such sum as shall be determined in accordance with the provisions of chapter 502 of the Acts of the year 1897.

ARTICLE 6. If other provision for the discharge of said sewage from said Charles-river Sewerage District and said Neponset Sewerage District, and payment therefor, shall in any year after the date hereof be made by act of the Legislature of the Commonwealth, the compensation for that year shall be such as the Legislature shall provide in such act, and the compensations, if any, provided for in this agreement for subsequent years, shall be null and void.

Signed this December thirty-first, 1897.

COMMONWEALTH OF MASSACHUSETTS,

By HOSEA KINGMAN,
TILLY HAYNES,
GEORGE A. KIMBALL,

Board of Metropolitan Sewerage Commissioners.

CITY OF BOSTON,

By JOSIAH QUINCY,
Mayor.

FINANCIAL STATEMENT.

Sewer assessments have been made by this division for the year ending January 31, 1898, in accordance with chapter 402 of the Acts of 1892, and amendments thereto, to the amount of \$39,534.95, and the bills have been deposited for collection with the City Collector.

Bills for sewer assessments amounting to \$2,738.40 have also been deposited for collection, representing those estates assessed under chapter 456 of the Acts of 1889, and amendments thereto, which have been connected with the public sewers during the year; making the total amount of assessments deposited for collection, \$42,273.35.

There remain on the books of this division, at 5 per cent. interest, \$25,308.24, representing the assessments under the Acts of 1889, and amendments thereto, for those estates which have not been connected with the sewer for which they were assessed, and bills for which will be deposited for collection as the connections are made. This sum represents 19.5 per cent. of the total assessments made under those acts.

Entrance fees to the amount of \$3,338.24 have been collected from estates upon which no sewer assessment was ever paid, in accordance with chapter 36, section 10, of the Revised Ordinances.

Permits have been issued to licensed drain-layers to make 4,194 connections with the public sewers, and the work done under these permits has been inspected, and a record of the same made on the plans of this division.

The following tables and statements will show the amount of money expended and work done by this division during the year:

Financial Statement.

APPROPRIATIONS.	Balances on hand February 1, 1897.	Appropriations and income added during year.	Total Credits.	Expenditures during the year.	Balances on hand January 31, 1898.
Street Department, Sewer Division					
Laying Out and Construction of Highways (Sewer Construction)	* \$292,862 71	† \$2,659 54	\$295,522 25	\$295,522 25	.....
Blue Hill and other avenues (Sewer Construction) .....	.....	196,199 39	196,199 39	196,199 39	.....
Sewerage Works .....	.....	40,853 22	40,853 22	40,853 22	.....
Stony Brook Improvement .....	.....	500,000 00	500,000 00	464,830 00	\$35,170 00
Back Bay outlet (\$5,000, all transferred).	1,849 26	400,000 00	401,849 26	260,741 16	141,108 10
Canal-st. relief sewer	17,462 03	.....	17,462 03	17,462 03	.....
Connection with Metropolitan Sewer, Charlestown	20,630 36	.....	20,630 36	20,630 36	.....
Connection with Metropolitan Sewer, East Boston	19,125 67	.....	19,125 67	19,125 67	.....
D-st. outlet and relief sewer, Dorchester ave	23,000 00	.....	23,000 00	23,000 00	.....
Dam from Maverick st. to Prescott st., East Boston	† 3,000 00	.....	3,000 00	.....	3,000 00
Forest-avenue Section, temporary sewer, outlet, etc.	1,314 94	.....	1,314 94	1,314 94	.....
Pumping Station Improvements	4,982 25	.....	4,982 25	4,982 25	.....
Sewer outlet, Porter st. (\$16,000, all transferred).	.....	.....	.....	.....	.....
Sewer outlet, low level, West Roxbury District	3,181 07	.....	3,181 07	3,181 07	.....
Sewer outlets, South Boston	16,104 92	.....	16,104 92	16,104 92	.....
Sewers, South Boston	794 71	.....	794 71	794 71	.....
Shamrock-st. outlet	7,041 95	.....	7,041 95	7,041 95	.....
Storm Sewers, Cornwall and Washington sts.	596 48	.....	596 48	596 48	.....
Totals	\$411,946 35	\$1,139,712 15	\$1,551,658 50	\$1,372,380 40	\$179,278 10

In addition to the above there was expended on account of Paving Division, for sewer and catch-basin work, necessitated by Street Construction, the sum of \$3,922.24; also for sewers necessitated by the construction of South Union Station, \$87,984.59, making a total of \$1,464,357.23.

* Original appropriation..... \$300,000 00
 Less transferred..... 7,137 29
 \$292,862 71

† Income.....
 Provided by Auditor in January, 1898.....

\$299 67
 2,429 87
 \$2,659 54

† Transferred from sewer outlet, Porter street.

OBJECTS OF EXPENDITURE.

IMPROVED SEWERAGE.

Pumping-station, inside	\$48,188 22
Pumping-station, outside	11,631 42
Engines and boilers	20,372 51
Main and intercepting sewers	24,145 02
Moon-Island maintenance	10,094 42
Moon-Island reservoir extension	455 26
Tow-boat	\$8,567 50
Less paid by Sanitary Division	7,155 74
	<u>1,411 76</u>
	<u>\$116,298 61</u>

PUMPING-STATION, FOREST-AVENUE SECTION, DORCHESTER.

Maintenance	<u>\$7,585 01</u>
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STONY BROOK.

Maintenance	<u>\$13,798 55</u>
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STONY BROOK IMPROVEMENT.

Salaries	\$20,419 39
Damages New England Brewing Company	17,915 06
Water furnished Boston Belting Company	5,677 20
Section 5	65,031 70
Section 6	6,295 26
Section 7	66,438 30
Connections at gate-house, Cedar and New Heath streets	40,345 50
Connection at Centre and Old Heath streets	16,860 58
Connection in private and city land at railroad	7,715 70
Forebay and gate-house connections	10,533 08
Miscellaneous	3,508 79
	<u>\$260,741 16</u>

MISCELLANEOUS.

Office expenses, Administration, Permit and Record offices, including salaries	\$29,902 27
Office expenses, Engineering Division, including salaries	81,911 12
Current expenses of yards and lockers	26,661 46
Current expenses of stables, including cost of horses, vehicles, harnesses, etc.	\$35,295 47
Less amount earned by department teams	11,365 66
	<u>23,929 81</u>
Repairing sewers	6,120 51
Cleaning and flushing sewers	10,681 96
Cleaning catch-basins	42,246 37
Repairing streets	607 69

Carried forward,

\$222,061 19

<i>Brought forward,</i>	\$222,061 19
Building, repairing and cleaning culverts and surface drains not included in the Stony-brook System . . .	36,491 72
Examining condition of sewers and catch-basins . . .	6,860 79
Work for departments and others	2,013 64
House connections	5,510 55
Damages and claims	941 10
Holidays, not included elsewhere	22,637 44
Travelling and incidental expenses	5,804 84
Repairing department buildings, stables and yards . . .	972 94
Engines, boilers and repairs	723 65
General repairs	639 11
Smoke inspection	1,340 75
Alterations, No. 30 Tremont street	1,044 95
Balances on old accounts, Pierce Farm sewer	492 02
Dredging Frost's dock, Neponset	320 06
Hardware, tools and blacksmithing, not included elsewhere	7,868 65
Rubber goods, not included elsewhere	1,635 07
Tools and supplies at storehouse, property of Central Division, but bought by Sewer Division	977 54
	<u>\$318,336 01</u>

South Boston.

Sewers built between February 1, 1897, and February 1, 1898, by the City, either by Contract or Day Labor.

LOCALITY.		Length in feet.	Dimensions and Material.	Remarks.	Expenditure during the fiscal year 1897-98.
Built in	Between				
B st.	Dorchester ave. and Broadway	119.00	5 ft. X 6 ft. 6 in., brick ..	Rebuilding (day labor),	\$2,391 86
B and Seventh sts. outlet . . .	Dorchester ave. and South Bay	457.61	6 ft. 6 in., circular brick..	Rebuilding (day labor),	18,739 08
Covington st.	East Eighth st. and Thomas park	290.30	12-in., pipe.....	Day labor	1,240 23
D st.	Dorchester ave. and Eighth st.	47.61	3 ft. 6 in. X 3 ft. 8½ in., brick.....	Rebuilding (day labor),	26,769 19
		1,602.05	4 ft. 9 in. X 5 ft. ¼ in., brick.....	Day labor	
Dorchester ave. . .	B st. and Dorr st.		3 ft. 6 in. X 3 ft. 8½ in., brick.....	Day labor	
Dorchester st.	Second st. and Emerson st. . .	244.60	12-in., pipe	Day labor	449 05
Dorr st.	Dorchester ave. and Ames st.	597.23	30 in. X 36 in., brick	Day labor	4,723 35
First st.	O st. and N st.	274.65	15-in., pipe	Day labor	437 03
Fourth st.	I st. and Jay st.	248.58	15-in., pipe	Contract; rebuilding..	914 29
II st.	Eighth st. and tide-water ...	110.00	10-in., pipe	Contract; rebuilding..	3,067 09
N-st. outlet	Existing sewer and tide-water	208.00	5 ft., circular brick	Rebuilding (day labor),	277 18
Tudor st.	F st. and Dorchester st.	357.14	12-in., pipe	Day labor (slate rock) ..	1,266 43
Q-st. outlet	Sixth st. and tide-water.	166.00	2 ft. 6 in., circular brick .	Day labor; rebuilding,	1,302 71
Total		4,855.27			\$61,577 49
7 new catch-basins built, and catch-basin repairs					3,994 52
					\$65,572 01

South Boston.—Concluded.*Sewers built between February 1, 1897, and February 1, 1898, by Private Parties.*

LOCALITY.		Length in feet.	Dimensions and Material.	Remarks.
Built in	Between			
N-st. outlet.....	Existing sewer and tide-water.....	70.00	3 ft. × 4 ft., brick..... 12-in., pipe. 12-in., pipe.	Built by the Park Department.
Ninth st.....	Existing sewer and L st.....	89.72		
Vale st.....	Mercer st. and Dorchester st.	749.91		
Total		909.63		

East Boston.*Sewers built between February 1, 1897, and February 1, 1898, by the City, either by Contract or Day Labor.*

LOCALITY.		Length in feet.	Dimensions and Material.	Remarks.	Expenditure during the fiscal year 1897-98.
Built in	Between				
Ashley ave.....	Bennington st. and Breed st.	728.16	2 ft. × 3 ft., brick.....	Contract.....	\$4,915 98
Border st.....	Connection with Metropolitan sewer near Decatur st..	.....		1 tide-gate manhole....	4,036 15
Border st.....	Connection with Metropolitan sewer at Eutaw st.	18.45	15-in., pipe.....	1 sump manhole.....	3,207 97
				1 regulator manhole..	
				1 overflow manhole....	
				1 tide-gate manhole....	

Border st.....	Connection with Metropolitan sewer near Lexington st.....	24.03	12-in., pipe.....	1 sump manhole..... 1 regulator manhole.. 1 overflow manhole.. 1 tide-gate manhole.. Contract.....	3,620 78
Bremen st.....	Existing sewer and Putnam st.	325.23	12-in., pipe.....	1 tide-gate manhole.. 1 sump manhole.....	738 99
Brooks st.....	Overflow at Bremen st.	.....	.....	1 regulator manhole.. 1 overflow manhole.. 1 tide-gate manhole.. 1 sump manhole.....	701 36
Cottage st.	Connection with Metropolitan sewer near Maverick st.	23.30	12-in., pipe.....	1 regulator manhole.. 1 overflow manhole.. 1 tide-gate manhole.. 1 sump manhole.....	3,179 76
Jeffries st.....	Connection with Metropolitan sewer at Maverick st...	7.50	12-in., pipe.....	1 regulator manhole.. 1 overflow manhole.. 1 tide-gate manhole.. Built in 1896.....	3,142 55
Liverpool st.....	Decatur st. and Central sq...	.....	.....	1 sump manhole..... 1 regulator manhole.. 1 overflow manhole.. 1 tide-gate manhole.. Built in 1896.....	17 94
Lamson st.....	Connection with Metropolitan sewer at Maverick st...	.....	.....	1 sump manhole..... 1 regulator manhole.. 1 overflow manhole.. 1 tide-gate manhole.. Built in 1896.....	2,708 08
Meridian st.....	Condon st. and Chelsea bridge	.....	.....	1 sump manhole..... 1 regulator manhole.. 1 overflow manhole.. 1 tide-gate manhole.. Built in 1896.....	31 33
Marginal st.....	Connection with Metropolitan sewer at Ruth st.....	.....	.....	.....	359 79
Porter st.....	Connection with Metropolitan sewer at Bremen st....	.....	.....	.....	22 54
Sumner st.....	Connection with Metropolitan sewer at Jeffries st....	13.50	12-in., pipe.....	Built in 1896..... 1 sump manhole..... 1 regulator manhole.. 1 overflow manhole.. 1 sump manhole.....	1,139 35
Sumner st.....	Connection with Metropolitan sewer near New st.....	27.80	12-in., pipe.....	1 regulator manhole.. 1 overflow manhole.. 1 tide-gate manhole.. Contract.....	3,115 11
Wordsworth st...	Saratoga st. and Pope st.....	{ 750.30 461.97	15-in., pipe..... 12-in., pipe.....	.....	913 19
Total		2,380 24	.....	.....	\$31,850 87
18 new catch-basins built, and catch-basin repairs.....		.....	.....	.....	2,447 77
					\$34,298 64

East Boston. — Concluded.*Sewers built between February 1, 1897, and February 1, 1898, by Private Parties.*

LOCALITY.		Length in feet.	Dimensions and Material.	Remarks.
Built in	Between			
Bayswater st....	Butler ave. and Austin ave..	999.64	12-in., pipe.	
Butler ave.....	Saratoga st. and tide-water..	304.21	12-in., pipe.	
Collins st.....	Bayswater and Washburn sts.	775.44	12-in., pipe.	
Thurston st.....	Butler ave. and Bayswater st.	560.25	12-in., pipe.	
		2,639 54		

Charlestown.*Sewers built between February 1, 1897, and February 1, 1898, by the City, either by Contract or Day Labor.*

LOCALITY.		Length in feet.	Dimensions and Material.	Remarks	Expenditure during the fiscal year 1897-98.
Built in	Between				
Chelsea st.....	Connection with Metropolitan Sewer at Vine st.....	.....	.....	{ 1 sump manhole.... 1 regulator manhole. 1 overflow manhole. 1 tide-gate manhole. }	\$2,817.93

Chelsea st.	Connection with Metropolitan Sewer at Medford st.	{ 23.30 190.83 }	24-in., pipe. 10-in., pipe.	{ 1 sump manhole. 1 regulator manhole. 1 overflow manhole. 1 tide-gate manhole. }	4,793 37
Russell st.	Eden st. and Mead st.	210.22	12-in., pipe.	Rebuilding. 1 sump manhole. 1 regulator manhole. 1 overflow manhole. 2 tide-gate manholes. Rebuilding.	915 00
Rutherford ave. . .	Connection with Metropolitan Sewer.	{ 46.00 45.00 10.00 38.00 }	6 ft. 6 in., circular brick. 3 ft. 9 in., circular brick. 24-in., pipe. 18-in., pipe.		11,051 58
Rutherford ave. . .	Outlet and Chapman st.	255.00	3 ft. 9 in., circular brick.		4,597 93
3 new catch-basins built, and catch-basin repairs.	Total.	818.35			\$24,175 81
					637 02
					\$24,812 83

Brighton.

Sewers built between February 1, 1897, and February 1, 1898, by the City, either by Contract or Day Labor.

Berwick road		424.43	12-in., pipe.....	Contract; considerable rock	\$2,481 85
Brooks st.....		{ 500.19	15-in., pipe.....		
Cambridge st.,		{ 349.12	12-in., pipe.....		2,397 11
No. 2					
Cambridge st.,		{ 602.93	30-in. × 36-in., brick...		2,652 85
No. 1		{ 232.80	15-in., pipe.....		
Chiswick road...		{ 350.00	30-in. × 36-in., brick...		3,342 26
		{ 399.81	12-in., pipe.....		1,901 82
		{ 215.72	10-in., pipe.....		

Brighton. — *Continued.*
Sewers built between February 1, 1897, and February 1, 1898, by the City, either by Contract or Day Labor.

LOCALITY.		Length in feet.	Dimensions and Material.	Remarks.	Expenditure during the fiscal year 1897-98.
Built in	Between				
Commonwealth ave.....	Strathmore road and Berkeley road.....	256.23	12-in., pipe.....	.....	\$486 07
Commonwealth ave.....	Sidlaw road and Strathmore road.....	229.15	12-in., pipe.....	Contract; some rock... Connection with out-	529 94
Commonwealth ave.....	Foster and Lake sts.....	20.90	12-in., pipe.....	let; rebuilding.....	179 61
		439.22	18-in., pipe.....	.....	4,120 71
		235.85	15-in., pipe.....	.....	
		631.03	12-in., pipe.....	.....	
Dunboy st.....	Faneuil st. and Bigelow st..	.....	.....	Built in 1896.....	94 40
Hobart st.....	.....	.....	.....	.....	.....
Lincoln st.....	200 ft. west of Waverly st. and Waverly st.	199.05	12-in., pipe.....	Rebuilding.....	289 66
Mt. Vernon ave...	Rockland st. and end of ave...	.....	.....	Built in 1896.....	126 57
North Beacon st..	Everett st. and Union sq....	399.82	12-in., pipe.....	Considerable ledge....	1,747 23
North Harvard st..	Coolidge road and Hopedale st. ....	.....	.....	.....	.....
Private land and Newton st.....	Parkman st., Brooks st. and Bigelow st.....	.....	.....	Built in 1896.....	55 25
Rockland st.....	Mt. Vernon st. and Jackson ave.....	158.15	15-in., pipe.....	.....	3,645 69
		480.83	12-in., pipe.....	.....	
Rockland st.....	Mt. Vernon st. and Mt. Vernon ave.....	190.00	12-in., pipe.....	Contract, ledge.....	2,019 97
Sidlaw road.....	Commonwealth ave. and Chiswick road.....	.....	.....	Built in 1896.....	83 47
		397.78	12-in., pipe.....	A large amount of rock,	3,985 85

Strathmore road..	Sutherland road and Commonwealth ave.....	962.56	12-in., pipe	Considerable water, ledge and boulders..	2,222 17
Strathmore road..	Commonwealth ave. and Chestnut Hill ave.	185.00	12-in., pipe	Contract; nearly all rock	146 52
Salt Creek outlet.	Metropolitan sewer and B. & A. R.R.	475.00	2-ft. 8-in. X 4-ft. brick..	Rebuilding	5,230 35
Union st.	Shepard st. and Winship st..	297.55	12-in., pipe	All ledge	2,554 97
Washington st.	Nantasket ave. and Commonwealth ave.....	750.00	15-in., pipe	Large amount of rock, Contract; some rock..	4,404 19
Webster st.	Off Cambridge st.	481.70	12-in., pipe .....	.....	1,852 14
Western ave.	Everett st. and North Harvard st.	525.13	24-in., pipe .....	.....	3,766 88
Western ave.	Everett and Waverly sts.	311.59	18-in., pipe .....	.....	1,026 60
		248.34	15-in., pipe .....	.....	
		414.35	12-in., pipe	Built in 1896.....	
					

Sewers built between February 1, 1897, and February 1, 1898, by the City, under Chapter 323 of the Acts of 1891, as amended by Chapter 418 of the Acts of 1892, or Special Acts referring thereto.

Commonwealth ave., outlet....	Lake st. and Commonwealth ave.	1,606.79	2 ft. 6 in., circular brick.	.....	\$16,482 47
		24.00	30-in., iron pipe .....	.....	
		229.39	18-in., pipe .....	.....	
		1,171.30	12-in., pipe .....	.....	
		169.00	15-in., pipe, C. B. drain..	.....	
		1,117.69	12-in., pipe, C. B. drain..	.....	
Commonwealth ave., Sect. No. 3 .....	.....	.....	.....	Built in 1896.....	66 65
Commonwealth ave. Sect. No. 5 .....	.....	.....	.....	Built in 1896.....	97 26

Brighton. — Continued.

LOCALITY.		Length in feet.	Dimensions and Material.	Remarks.	Expenditure during the fiscal year 1897-98.
Built in	Between				
Malvern st.	Brighton ave. and Ashford st.	{ 370.35 99.41 644.37 58.86 }	{ 12-in., pipe..... 10-in., pipe..... 6-in., pipe, house drain.. 10-in., pipe, C. B. drain.. 5 catch-basins .....	..... ..... ..... ..... .....	\$461 69
Total .....		.....	.....	.....	\$68,452 24
50 new catch-basins and 1 drop-inlet built, and catch-basin repairs.....		.....	.....	.....	9,964 15
					\$78,416 39

Sewers built between February 1, 1897, and February 1, 1898, by Private Parties.

LOCALITY.		Length in feet.	Dimensions and Material.	Remarks.
Built in	Between			
Allston Heights..	Cambridge st. and Ridgmont ave.	203.90	12-in., pipe.	
Allston Heights..	Ridgmont ave. and end of Allston Heights.....	329.97	12-in., pipe.	

Antwerp st.	Western ave. and Lincoln st. .	{	1,185.84	15-in., pipe.
Cambridge terrace	Cambridge st. and Webster terrace	}	665.60	12-in., pipe.
Franklin st.	Allcott st. and Lincoln st. .		299.32	10-in., pipe.
Franklin st.	Raymond st. and 200 ft. northerly		262.01	12-in., pipe.
Harvard ave.	Cambridge st. and Brighton ave.		245.67	12-in., pipe.
Harvard ave.	200 ft. and 400 ft. north of Brighton ave.		771.08	12-in., pipe.
Lincoln st.	Existing sewer and 170 ft. easterly		222.15	12-in., pipe.
Maple ave.	Etna st. and George st.		170.16	12-in., pipe.
Montfern ave.	Faneuil st. and Washington st.		196.47	12-in., pipe.
Oak square ave. .	Faneuil st. and Washington st.		777.66	12-in., pipe.
Private st.	Off Everett st. near Cleveland st.		947.49	12-in., pipe.
Quint ave.	Off Brighton ave.		176.63	10-in., pipe.
Rockland st.	Jackson ave. and 100 ft. southerly		212.27	12-in., pipe.
Telford st.	Western ave. and Charles river reservation.		100.00	12-in., pipe.
			335.25	12-in., pipe.

Surface drains built between February 1, 1897, and February 1, 1898, by the City, either by Contract or Day Labor.

Chiswick road ..	Fenwick road and 36 ft. easterly	37.00	10-in., pipe	Contract.
Commonwealth ave.	Sidlaw road and Strathmore road	129.25	18-in., pipe	}
		33.28	12-in., pipe	
		101.10	10-in., pipe	Contract.

Brighton. — Concluded.

LOCATION.		Length in feet.	Dimensions and Material.	Remarks.
Built in	Between			
Commonwealth ave.	Near Strathmore road.	223.75	30-in., pipe.	Contract. Connection with outlet; rebuilding.
Commonwealth ave.	Foster st. and Lake st.	34.00	12-in., pipe.	
Parsons st.	Washington st. and 200 ft. northerly.	205.00	12-in., pipe.	Contract.
Private land.	Commonwealth ave. and Chiswick road.	583.79	24-in., pipe.	Contract; ledge and boulders.
		1,347.17		
<i>Culverts built between February 1, 1897, and February 1, 1898, by Private Parties.</i>				
Private land.	Off Commonwealth ave., near Harvard ave.	160.13	5 ft. × 6 ft., concrete.	

West Roxbury.

Sewers built between February 1, 1897, and February 1, 1898, by the City, either by Contract or Day Labor.

LOCALITY.		Length in feet.	Dimensions and Material.	Remarks.	Expenditure during the fiscal year 1897-98.
Built in	Between				
Anson st.....	.....	.....	.....	Just begun.....	\$5 50
Adelaide st.....	Boylston st. and Spring Park ave	275.22	12-in., pipe .....	.....	.....
Florence-st. Dist.:	.....	769.05	12-in., pipe.....	.....	.....
Brook st.....	Florence st. and Sycamore st.,	1,151.39	12-in., pipe.....	All rock.....	1,959 51
Brown ave	Florence st. and Allen st....	616.78	24-in., pipe.....	.....	.....
.....	.....	392.27	15-in., pipe.....	.....	.....
Florence st.....	Ashland st. and Blakemore st.,	861.10	12-in., pipe.....	.....	.....
Private land....	Washington st. and Florence st	861.00	2 ft. X 3 ft., brick.....	.....	.....
Prospect ave....	Sycamore st. and Brown ave.,	370.52	12-in., pipe.....	.....	.....
Ridge st.....	Sycamore st. and Brown ave.,	221.50	18-in., pipe.....	.....	33,006 36
Sheldon st.....	Prospect ave. and existing sewer.....	568.52	12-in., pipe.....	.....	.....
Sherwood st....	Florence st. and Ashland st..	345.35	12-in., pipe.....	.....	.....
Sycamore st....	Florence st. and Ashland st..	584 45	12-in., pipe.....	.....	.....
Linnet st.....	Bellevue st. and 440 ft. south-westerly.....	445.94	18-in., pipe.....	A large amount of rock.	.....
Perkins st.....	Jamaicaway and Day st.	924.48	12-in., pipe.....	.....	1,051 71
Private land....	At Brookside ave	438.42	12-in., pipe .....	.....	8,297 03
.....	.....	1,135.00	12-in., pipe .....	.....	238 37
.....	.....	110.39	10-in., pipe .....	.....	.....

West Roxbury.—Continued.

LOCALITY.		Length in feet.	Dimensions and Material.	Remarks.	Expenditure during the fiscal year 1897-98.
Built in	Between				
Private land, Mozart, Selwyn and Arundel sts....	Hewlett and Walter sts., and Centre st.....	{ 1.84 1,579.85 211.10	{ 18-in., pipe..... 12-in., pipe..... 12-in., pipe.....	.....	\$7,416 56 301.50
St. John st.....	Existing sewer and Centre st.,				
Selwyn st. and private land.....	Arundel st. and Walter st....				
Walk Hill st. and Bourne st.....	Wachusett st. and Patten st.,	518.05	12-in., pipe.....	.....	745 92
Washington st....	Forest Hills st. and Boylston st	{ 325.25 220.26	{ 15-in., pipe..... 12-in., pipe.....	Considerable rock....	6,339 36 3,648 06
Woodside ave....	Washington st. and Forest Hills st.....				
		424.90	12-in., pipe.....	Contract.....	850 41
		13,562.13			
<i>Sewers built between February 1, 1897, and February 1, 1898, by the City, under Chapter 323 of the Acts of 1891, as amended by Chapter 418 of the Acts of 1892, or Special Acts referring thereto.</i>					
Belmore terrace..	Boylston st. and Boylston terrace.....	{ 43.00 16.00	{ 10-in., pipe, C.B. drain.. 6-in., pipe, house drain.. 3 catch-basins.....	All rock.....	\$523 91
27 new catch-basins built, and catch-basin repairs	Total				
		59.00			\$64,384 20 2,105 15
					\$66,489 35

Sewers built between February 1, 1897, and February 1, 1898, by Private Parties.

LOCALITY.		Length in feet.	Dimensions and Material.	Remarks.
Built in	Between			
Crest st.....	Existing sewer and 210 feet westerly.....	210.50	12-in., pipe.	
Marion st.....	Florence st. and end of street.	413.46	12-in., pipe.	
Montebello road...	Washington st. and Walnut av.	175.00	12-in., pipe.	
Newsome Park...	Eliot st. and Burroughs st...	221.08	12-in., pipe.	
Patten st.....	Hyde Park ave. and Bourne st.....	689.53	12-in., pipe.	
Wachusett st.....	Eldridge road and Patten st..	313.17	12-in., pipe.	
Zamora st.....	Castleton st. and Perkins st..	621.22	10-in., pipe.	
		2,643.96		

Surface Drains built between February 1, 1897, and February 1, 1898, by the City, either by Contract or Day Labor.

Hyde Park ave...	Stony brook and Weld Hill st.	391.05	18-in., pipe.	
Wachusett st.....	Eldridge road and Patten st.	223.47	12-in., pipe.	

Surface Drains built between February 1, 1897, and February 1, 1898, by Private Parties.

Dorchester.

Sewers built between February 1, 1897, and February 1, 1898, by the City, either by Contract or Day Labor.

LOCALITY.		Length in feet.	Dimensions and Material.	Remarks.	Expenditure during the fiscal year 1897-98.
Built in	Between				
Birch st.	Chapman ave. and Lauriat ave.	289.86	12 in., pipe	Contract; some rock..	\$288 48
Branch ave.	Existing sewer and private land	148.62	12-in., pipe .....	.....	707 93
Private land	Branch ave. and Arcadia st. .				
Chapman ave. ....	.....			Built in 1896	1,680 13
Coffey st.	Lyons and Tucker sts.	855.00	12-in., pipe	Contract; much rock,	2,821 43
	Existing sewer and Newhall st.	100.00	15-in., pipe .....	.....	1,230 89
	.....	298.98	12-in., pipe		
Coffey st.	Intercepting sewer and private land	369.02	15-in., pipe		
Private land	Coffey and Ashmonts ts.	222.39	15-in., pipe		
Ashmont st.	Neponset ave. and Train st. .	76.31	12-in., pipe	Contract.	2,473 15
Elmo st.	Main sewer, westerly, toward Erie st.	990.43	12-in., pipe		
Evans st.	Capeu st.	99.00	12-in., pipe	Very much rock.	840 91
	and Nelson st.				
Evans st.	Capeu and Stanton sts.	171.22	12-in., pipe	Day labor	216 05
	Morton and Nelson sts.	447.42	12-in., pipe	Contract; much rock,	1,424 75
Evans st.		575.00	12-in., pipe	Contract; very much rock	2,964 17

Evans st.	Nelson st. and existing sewer at summit towards Capen st.	300.00	12-in., pipe.....	Some rock.....	588 05
Forest ave., Sect. 1, in Willowwood st.	Lauriat ave. and Ballou ave.	133.41	15-in., pipe.....	Contract.....	1,096 03
Ballou ave.	Willowwood and Norfolk sts.	.....	.....	Much rock.....	
Forest ave., Sect. 2, in Norfolk st.	Ballou ave. and private place,	.....	.....	.....	
Private place and land.....	Norfolk st., Morton and Evans sts.....	987.26	15-in., pipe.....	Very much rock.....	11,488 21
Morton st.....	Evans st. and Selden st.....	.....	.....	.....	
Forest ave., Sect. 3, in Selden st.	Morton st. and passageway..	1,298.97	15-in., pipe.....	Some rock.....	
Passageway.....	Selden and Fuller sts.....	.....	.....	.....	
Fuller st.....	Passageway and Capen st. ..	.....	.....	.....	
Forest ave., Sect. 4, in Capen st.	Fuller and Norfolk sts.....	1,545.26	12-in., pipe.....	.....	5,590 91
Fuller st.....	Passageway and Morton st ..	225.00	12-in., pipe.....	Contract; much rock.	654 85
Grampian way ..	Westerly junction with Savin Hill ave. and summit.....	548.35	12-in., pipe.....	Contract; very much rock.....	2,810 40
Greenwood st.	Existing sewer and Elmo st..	459.68	12-in., pipe.....	Contract; considera- ble rock.....	292 57
Elmo st.....	Greenwood st., westerly ....	.....	.....	.....	
Leedsville st.	Dorchester ave. and Adams st.....	600.75	12-in., pipe.....	Contract.....	2,172 49
Lyons st. ....	.....	.....	.....	Built in 1896	213 26
Franklin Field ..	.....	.....	.....	.....	
Mascot st.	Mountain ave. and Norfolk st.....	1,275.00	12-in., pipe.....	Some rock.....	2,581 76
Jones ave.	Mascot st. and private land..	.....	.....	.....	
Private land	Jones ave. and Lauriat ave..	461.00	12-in., pipe.....	Contract.....	1,062 94
Mountain ave.....	Lauriat ave. and Ballou ave..	240.00	12-in., pipe.....	Very much rock	
Dumas st.....	Mascot and Willowwood sts.,	498.60	15-in., pipe.....	.....	
Neponset ave.....	Bertram and Chickatawbut sts.	811.85	12-in., pipe.....	Some piling	5,107 33

Dorchester. — *Continued.**Sewers built between February 1, 1897, and February 1, 1898, by the City, either by Contract or Day Labor.*

LOCALITY.		Length in feet.	Dimensions and Material.	Remarks.	Expenditure during the fiscal year 1897-98.
Built in	Between				
Newhall ave.....	Newhall st. and summit	786.85	12-in., pipe.....	.....	\$2,061 73
Newhall st.....	Pierce and Ashmont sts.....	539.55	12-in., pipe.....	.....	209 64
Newhall pl.....	Newhall ave. and lot line.....	199.30	12-in., pipe.....	Contract; considerable	1,253 35
Nelson st.....	Selden and Norfolk sts.....	525.00	12-in., pipe.....	rock.....	397 44
Oak ave.....	Plain and Adams sts.....	323.45	12-in., pipe.....	Contract.....	1,083 53
Oak terrace.....	Lyons and Birch sts.....	501.98	12-in., pipe.....	Some rock.....	5,119 06
Lyons st.....	Chapman ave. and Oak ter...	157.10	12-in., pipe.....	All rock.....	2,339 73
Percival st.....	Bowdoin and Fox sts.....	827.35	12-in., pipe.....	.....	905 32
Pierce st.....	Intercepting sewer and sum- mit.....	664.81	15-in., pipe.....	.....	10,350 84
Plain st.....	Pierce and Chickatawbut sts.	705.88	12-in., pipe.....	.....	
Mill st.....	Intercepting sewer and Adams st.....	670.24	12-in., pipe.....	.....	
Rosemont road....	Adams and Samoset sts.....	115.00	3 ft. 4 in. × 5 ft., brick.	.....	
Private land.....	Junction of Samoset st. and Rosemont-st., extension.....	.....	.....	.....	
Brent st.....	Melbourne and Carlisle sts...	705.87	3 ft. × 4 ft. 10 in., brick.	.....	
Devon st. outlet in private land.....	Lawrence ave. and Stanwood st.....	300.40	15-in., pipe.....	Much rock.....	7,241 14
Devon st. outlet in private land.....	Richfield and Columbia sts...	11.60	12-in., pipe.....	Very much rock.....	10,393 81
		1,205.22	15-in., pipe.....		
		341.30	12-in., pipe.....		

River st.....	Intercepting sewer, and Fre-		15-in., pipe.....	Contract.....	5,618 34
Fremont st.....	mont st.....	{	12-in., pipe.....	Very much rock.....	
Norfolk st.....	River to Norfolk st.....	{	12-in., pipe.....	Contract.....	519 99
Robinson st.....	Fremont st. and Cook's ct..	{	12-in., pipe.....	Contract; some rock...	1,437 88
Sawyer ave.....	Adams and Draper sts.....	{	12-in., pipe.....	Contract.....	3,050 86
{ Shelton st.....	Downer and Cushing aves...	{	12-in., pipe.....	Contract; much rock.	
{ Private land.....	Bruce and Adams sts.....	{	12-in., pipe.....	Just begun, nothing	
Stanwood st.....	Templeton and Shelton sts...	{	12-in., pipe.....	charged in 1897.	139 86
	Normandy st. and Blue Hill ave.	{	12-in., pipe.....	Contract; some rock...	
Stanwood st.....	Normandy st. and Columbia	{	12-in., pipe.....	Much piling.....	11,685 65
	road.....	{	7-ft., brick.....	Some piling.....	2,027 95
Shamrock-st. outlet	Tide-water and Freeport st...	{	4-ft., brick.....	Contract; much rock...	2,968 85
		{	Treble, 4-ft., brick.....	Contract; much rock...	3,114 36
Tolman st.....	Neponset ave. and Norwood st.	{	12-in., pipe.....	.....	1,251 00
Washington st.....	Trunk sewer and Sanford st..	{	12-in., pipe.....		
Washington st.....	Miller's lane and Grant pl....	{	12-in., pipe.....		
Wrentham st.....	Dorchester ave. and existing	{	12-in., pipe.....		
	sewer.....	{	12-in., pipe.....		

Sewers built between February 1, 1897, and February 1, 1898, by the City, under Chapter 323 of the Acts of 1891, as amended by Chapter 418 of the Acts of 1892, or Special Acts referring thereto.

Athelwold st.....	Kilton and School sts.....	{	15-in., pipe, sewer.....	Contract; considerable	\$4,305 55
		{	12-in., pipe, sewer.....	rock.....	
		{	6-in., pipe, house drain.		
		{	18-in., pipe, C. B. drain.		
		{	15-in., pipe, C. B. drain.		
		{	12-in., pipe, C. B. drain.		
		{	10-in., pipe, C. B. drain.		
		{	4 catch-basins.....		
		{	3 drop-inlets.....		
		{	4 ft. X 3 ft. 9 in., concrete		
		{	culverts.....		
		{	131.25		
		{	900.52		
		{	379.50		
		{	151.20		
		{	210.51		
		{	280.43		
		{	116.39		
		{	43.00		

Dorchester. — Continued.

Sewers built between February 1, 1897, and February 1, 1898, by the City, under Chapter 323 of the Acts of 1891, as amended by Chapter 413 of the Acts of 1892, or Special Acts referring thereto.

LOCALITY.		Length in feet.	Dimensions and Material.	Remarks.	Expenditure during the fiscal year 1897-98.
Built in	Between				
Blue Hill ave., Sect. 4, and part of Sect. 3.....		902.13 5.00 137.66	12-in., pipe, sewer..... 8-in., pipe, sewer..... 10-in., pipe, C. B. drain. 7 catch-basins.	Contract; some rock..	\$1,604 82
Blue Hill ave., Sects. 1 to 16...		 30.00 195.00	 12-in., pipe, sewer..... 6-in., pipe, house drain..	 Contract.....	1,959 63
Bloomfield st. . .	Geneva ave. and Greenbrier st.	961.78 84.13 32.00 708.00 323.50 1,001.45 401.30	12-in., pipe, C. B. drain... 10-in., pipe, C. B. drain... 4 catch-basins..... 4 drop-inlets..... 12-in., pipe, sewer..... 6-in., pipe, house drain.. 30-in., pipe, C. B. drain. 24-in., pipe, C. B. drain. 18-in., pipe, C. B. drain. 15-in., pipe, C. B. drain. 12-in., pipe, C. B. drain. 10-in., pipe, C. B. drain. 10 catch-basins..... 1 drop-inlet..... 7 ft. x 5 ft. 8 in., concrete culvert.....	 Some rock..... Contract.....	1,089 28
Bernard st.	Talbot ave. and Harvard st..	84.50 89.00 71.80 .....	..... ..... ..... ..... ..... .....	Contract	6,741 18

Burt st.....	Ashmont and Washington sts.	251.35 15-in., pipe, sewer..... 1,037.08 12-in., pipe, sewer..... 980.50 6-in., pipe, house drain.. 679.75 12-in., pipe, C. B. drain.. 52.00 10-in., pipe, C. B. drain.. 4 catch-basins..... 2 drop-inlets..... 39.90 4 ft. X 3 ft. 5 in., stone culvert.....	Contract; very much rock	8,634 30
Columbia road, Sect. 4.....	Edward Everett sq. and Dudley st.....	951.92 12-in., pipe, sewer..... 84.00 10-in., pipe, sewer..... 288.00 6-in., pipe, house drain.. 4 catch-basins..... 3 drop-inlets.....	Contract	2,392 53
Chamberlain st..	.....	.....	Built in 1896.....	23 27
Chamblct st.....	Magnolia and Hartford sts..	40.00 10-in., pipe, sewer..... 46.00 4 catch-basins..... 336.00 10-in., pipe, sewer..... 6-in., pipe, house drain.. 3 catch-basins.....	Contract	1,126 05
Ellet st.	Dorechester ave. and Adams st.	548.00 15-in., pipe, sewer..... 766.00 12-in., pipe, sewer..... 260.00 6-in., pipe, house drain.. 351.00 15-in., pipe, C. B. drain.. 505.00 12-in., pipe, C. B. drain.. 4 catch-basins..... 50.00 18-in., pipe, culvert.....	Contract	567 25
Elizabeth st.....	Norfolk and Astoria sts.....	.....	.....	.....
Outlet in Norfolk st.....	Morton and Elizabeth sts....	.....	Contract; very much rock	6,468 94
and Morton st...	Culvert and Norfolk st.....	.....	.....	.....

Dorchester. — *Continued.*

Sewers built between February 1, 1897, and February 1, 1898, by the City, under Chapter 323 of the Acts of 1891, as amended by Chapter 418 of the Acts of 1892, or Special Acts referring thereto.

LOCALITY.		Length in feet.	Dimensions and Material.	Remarks.	Expenditure during the fiscal year 1897-98.
Built in	Between				
Fenelon st. ....	.....	1,612.48 2,132.00 125.50 414.20	 12-in., pipe, sewer..... 6-in., pipe, house drain... 18-in., pipe, C. B. drain.. 15-in., pipe, C. B. drain.. 12-in., pipe, C. B. drain.. 10-in., pipe, C. B. drain.. 17 catch-basins..... 7 drop-inlets.....	Built in 1896.	\$16 99
Fairmount st.	Washington and Morton sts..	1,474.40 204.00	 24-in., pipe, culvert..... 18-in., pipe, culvert.....	Contract; some rock...	5,955 74
Gaylord st. ....	.....	53.90 35.00	 12-in., pipe, C. B. drain.. 10-in., pipe, C. B. drain.. 1 catch-basin..... 1 drop-inlet.....	Built in 1896..... Day labor.	22 20 161 85
Geneva ave.	Park and Westville sts.	646.00 10.00	 6-in., pipe, house drain.. 12-in., pipe, C. B. drain..	Contract; built in 1896, Contract.	39 12 366 44
Greenbrier st.	Bloomfield and Park sts. ....	.....	.....	Built in 1896.....	625 00
Lauriat ave. ....	.....	.....	.....	.....	.....

Leroy st.	Ditson st. and Geneva ave. ..	51.00 147.00 137.00 349.00 44.00 40.00	12-in., pipe, sewer..... 10-in., pipe, sewer..... 6-in., pipe, house drain.. 12-in., pipe, C. B. drain.. 10-in., pipe, C. B. drain.. 2 catch-basins..... 2 drop-inlets..... 4 ft. 6-in., X 5-ft. concrete culvert.....	Contract.....	1,299 00
Morse st. ....	.....	..... 64.95 78.00	12-in., pipe, sewer..... 6-in., pipe, house drain.. 3 catch-basins..... 3 drop-inlets.....	Built in 1896.....	10 23
Oakley st.....	Geneva ave. and Bowdoin st.	42.73 562.96 95.95	15-in., pipe, C. B. drain.. 12-in., pipe, C. B. drain.. 10-in., pipe, C. B. drain..	Contract; some rock....	807 51

Sewers built between February 1, 1897, and February 1, 1898, by the City, under Chapter 323 of the Acts of 1891, as amended by Chapter 418 of the Acts of 1892, or special Acts referring thereto.

Rosseter st. and outlet.....	12-in., pipe, sewer.....	\$30.00	Contract; some rock..	\$1,584 23
	6-in., pipe, house drain..	639.00		
Bullard st. and Bowdoin ave.	18-in., pipe, C. B. drain..	375.00		
	15-in., pipe, C. B. drain..	59.00		
	12-in., pipe, C. B. drain..	100.00		
	12-in., pipe, sewer.....	1,608.10		
	6-in., pipe, house drain..	1,556.85		
	12-in., pipe, C. B. drain..	91.50		
	10-in., pipe, C. B. drain..	128.65		
	6 catch-basins.....	.....		
	3 drop-inlets.....		Contract; some rock..	2,871 79
Greenbrier st. and Geneva ave.				
Tonawanda st....				

Dorchester. — *Continued.*

LOCALITY.		Length in feet.	Dimensions and Material.	Remarks.	Expenditure during the fiscal year 1897-98.
Built in	Between				
Wilder st.				Built in 1896	\$33 15
Wolcott st.				Built in 1896	62 26
Total					\$170,245 33
82 new catch-basins and 10 drop-inlets built, and catch-basin repairs					4,234 44
					\$174,479 77

Sewers built between February 1, 1897, and February 1, 1898, by Private Parties.

LOCALITY.		Length in feet.	Dimensions and Material.	Remarks.
Built in	Between			
Ballou ave.	Lauriat ave. and summit....	695.70	12-in., pipe.	
Bellevue st. extension	Barrington st. and Kane st....	367.40	12-in., pipe.	
Bowdoin sq.	Tonawanda st. and Stratford st.	424.12	12-in., pipe.	
Brunswick st....	Normandy st. and Columbia road	528.00	12-in., pipe.	

Dakota st.	Greenbrier st. and Bowdoin sq.	250.12	12-in., pipe.
Devon st.	sewer		
Drayton ave.	Quincy st. and Bodwell st. ..	129.00	15-in., pipe.
Elmhurst st.	Southern ave. and Norfolk st.	221.25	12-in., pipe.
Elmo st.	Existing main sewer, wes-	435.15	12-in., pipe.
Everett road, for-	terly towards Erie st.		
merly Coffin st. .	Springdale st. and Savin Hill	416.00	12-in., pipe.
Ferndale st.	ave.		
Floyd st.	Southern ave. and Norfolk st.	267.75	12-in., pipe.
Gawain st.	Blue Hill ave., easterly	285.20	12-in., pipe.
Half Moon st.	Park st. and Athelwold st. ..	199.53	12-in., pipe.
Homes ave.	Existing sewers and summit	726.64	12-in., pipe.
Homes ave.	at angle		
Lindsey st.	Geneva ave. and Bowdoin st.	294.58	12-in., pipe.
Mallet st.	Toplift st. and Geneva ave. .	318.95	12-in., pipe.
Normandy st.	Greenbrier st. and property	475.10	12-in., pipe.
Normandy st.	line		
Normandy st.	Shawmut pk. and Adams st.	515.92	12-in., pipe.
Normandy st.	Seaver st. and Columbia road	659.77	12-in., pipe.
Normandy st.	Washington st. and Seaver st.	850.00	12-in., pipe.
Perth st.	Grove st. and Lawrence ave. .	779.45	12-in., pipe.
Pinckney road ...	Quincy st. and Phipps ave. .	94.76	12-in., pipe.
Phipps ave.	Normandy st. and Columbia	202.00	12-in., pipe.
Quincefield st. ...	road		
Ridge road	Existing sewer and Dunkeld	448.08	12-in., pipe.
Samoset st.	st.		
Seaver st.	Humphreys st. and Hum-	486.23	12-in., pipe.
	phreys sq.		
	Park st. and Bowdoin st.	240.51	12-in., pipe.
	Rosemont st., northerly	431.35	12-in., pipe.
	Columbia road and Blue Hill	125.00	12-in., pipe.
	ave.		
		700.79	12-in., pipe.

Dorchester. — *Continued.*

LOCALITY.		Length in feet.	Dimensions and Material.	Remarks.
Built in	Between			
Santuit st.	Rosemont st. and Welles ave.	200.00	12-in., pipe.	
Stratford st.	Greenbrier st. and property line	578.50	12-in., pipe.	
Stratton st.	Blue Hill ave., easterly	209.26	12-in., pipe.	
Tonawanda st. ...	Greenbrier st. and proposed st.	221.75	12-in., pipe.	
Washington st. ...	Blue Hill ave. and Columbia road	1,036.32	12-in., pipe.	
Wellesley pk.	Park st. and Melville ave. ...	1,194.07	12-in., pipe.	
York st.	Greenwood st. and Glenway st.	354.89	12-in., pipe.	
<i>Surface Drains built between February 1, 1897, and February 1, 1898, by the City, either by Contract or Day Labor.</i>				
Ashmont st.	Culvert and Adams st.	226.00	12-in., pipe, C. B. drain.	
Branch ave.	Existing basins and private land	73.00	10-in., pipe, C. B. drain.	
Private land	Branch ave. and Ditson st. ...	385.55	12-in., pipe, C. B. drain.	
Kilton st.	Talbot ave. and Wheatland ave.	399.00	12-in., pipe, C. B. drain.	
Leedsville st.	Dorchester ave. and Adams st.	22.00	10-in., pipe, C. B. drain.	
		594.04	{ 18-in., pipe, C. B. drain. } 1 catch-basin.	

Private land.....	Junction of Samoset st. and Rosemont-st. extension and Melbourne st.....	40.50	4 ft. 6 in. X 4 ft. 3 in., brick conduit.
Private land.....	Lawrence ave. and Stanwood st.....	124.28	4 ft., circular brick.
Private land.....	Davenport st., Brook st. and Ashmont st.....	282.20	3 ft. 6 in., circular brick.
Ashmont st.....	Waldorf st. and Montague st.	204.43	30-in., pipe, C. B. drain.
Sydney st.....	Land of Campbell and Savin Hill ave.....	169.82	24-in., pipe, C. B. drain.
Savin Hill ave....	Sydney st. and Midland st...	218.32	18-in., pipe, C. B. drain.
Midland st.....	Savin Hill ave. and Bay st..	560.28	15-in., pipe, C. B. drain.
		652.85	12-in., pipe, C. B. drain.
		88.11	10-in., pipe, C. B. drain.
		225.00	12-in., pipe, C. B. drain.
		395.00	12-in., pipe, C. B. drain.

Surface Drains built between February 1, 1897, and February 1, 1898, by the City, either by Contract or Day Labor.

Tenean creek or Smelt creek...	From a point nearly opposite Elm st. to a point on Park st., between Dorchester ave. and Geneva ave.....	130.00	14 ft. X 12 ft., brick conduit.
Wessex st.....	Shenandoah st. and Weyanoke st.....	129.80	30-in., pipe, C. B. drain.
Weyanoke st.....	Wessex st. and Bushnell st..	562.75	20-in., pipe, C. B. drain.
Bushnell st.....	Weyanoke st. and Rowena st.	128.65	18-in., pipe, C. B. drain.
			3 catch-basins.
<i>Surface Drains built between February 1, 1897, and February 1, 1898, by Private Parties.</i>			
Dorchester ave..	Adams st. and Richmond st.	25.30	18-in., pipe.

Dorchester. — *Concluded.**Culverts built between February 1, 1897, and February 1, 1898, by the City, either by Contract or Day Labor.*

LOCALITY.		Length in feet.	Dimensions and Material.	Remarks.
Built in	Between			
Private land.....	Sydney st., land of Eben Bacon.....	156.50	24-in., pipe.	

Roxbury.*Sewers built between February 1, 1897, and February 1, 1898, by the City, either by Contract or Day Labor.*

LOCALITY.		Length in feet.	Dimensions and Material.	Remarks.	Expenditure during the fiscal year 1897-98.
Built in	Between				
Atherton-st. extension.....	Amory st. and Lamartine st.,	{ 64.98	12-in., pipe.....	.....	\$643 81
Beacon st.....	Charlesgate west, and Kenmore st.....		10-in., pipe.....	.....	
Burke st.....	Tremont st. and Columbus ave.....	70.14	15-in., pipe.....	Part rebuilding.....	343 69
		270.21	18-in., pipe.....	Rebuilding. This cost includes both house and storm sewer....	1,291 41

Columbus ave....	Old Heath st. to Ritchie st..	{ 249.00 207.00	{ 24-in., pipe, sewer..... 4 ft. X 4 ft., brick and stone, C. B. drain..... 8 ft. X 8 ft. 6 in., brick, 4 ft. 6 in. X 6 ft. 9 in., brick.....	.....	3,287 32
Dorchester-brook sewer.....	Norfolk ave. and Clifton st..	{ 149.00 120.39	{ 2 ft. 8 in. X 4 ft., brick, In reducers..... 18-in., pipe..... 12-in., pipe..... 12-in., pipe.....	Rebuilding.....	18,079 26
East Lenox st....	Fellows st. and Reed st....	10.00	12-in., pipe.....	.....	178 22
Eldora st.....	Hillside st. and existing sewer.....	22.00	12-in., pipe.....	.....	458 28
Ellingwood st....	Lawn st. and end.....	20.00 23.00 78.00	15-in., pipe.....	Built by contract, 205 ft. of 6 in. and 10 in., chimneys built.....	1,769 16 1,476 11
Fellows ct.....	Fellows st. and end.....	120.21 698.30	12-in., pipe..... 2 ft. 10 in. X 4 ft. 3 in., brick.....	Rebuilding.....	36,417 47
Harrison ave.....	Massachusetts ave. and Eus- tis st.....	{ 275.50 1,454.00	{ 2 ft. 4 in. X 3 ft. 6 in., brick..... In reducers..... 12-in., pipe..... 12-in., pipe..... 12-in., pipe..... 12-in., pipe.....	Old sewer removed.. Piles.....	117 18 640 84 1,833 64 491 43
Heath st.....	Parker st. and Wensley st...	11.00	12-in., pipe.....	Just begun.....	600 99
Hutchins ave....	Day st. and Lawn st.....	248.00	12-in., pipe.....	Built by contract.....	465 23
Hunnehan st....	Harrison ave. and Fellows st., ...	65.20 218.00 380.10	12-in., pipe.....	Built by contract.....	719 33
Ipswich st.....	.....	.....	.....	.....	.....
Mozart st.....	Armstrong st. and Centre st.....	330.92	12-in., pipe.....	Built by contract.....	.....
Old Heath st....	Albert st. and Bromley st...	84.00	3 ft. X 4 ft., brick.....	Rebuilding.....	.....
Parker Hill ave...	Parker st. and Calumet st...	222.82	12-in., pipe.....	Built by contract.....	.....

Roxbury. — Continued.

LOCALITY.		Length in feet.	Dimensions and Material.	Remarks.	Expenditure during the fiscal year 1897-98.
Built in	Between				
Shawmut ave., Roxbury st., and Guild row.....	Vernon st. and Dudley st....	20.18	3 ft. 6 in. × 5 ft. 6 in., brick.....	Rebuilding.....	\$4,134 51
Wabeno st.....	Waumbeck st. and Wyoming st.	234.49	12-in., pipe.....	Built by contract.....	1,060 73
Walnut ave.....	Pickering ave. and Rockland st.....	162.20	12-in., pipe.....	Built by contract.....	582 95
Walpole st.....	Tremont st. and Columbus ave.....	233.78	18-in., pipe.....	Built by contract.....	260 52
Washington st...	Nawn st. and Williams st....	225.17	12-in., pipe.....	.....	840 65
West Roxbury low level sewer.....	Roxbury crossing and end of existing sewer south of Amory st.....	{ 1,200.00 72.00 34.00 891.00 27.00 }	{ 2 ft. × 3 ft., brick 2 ft. 6-in., iron pipe..... 2 ft. 6 in., circular brick } 2 ft. × 3 ft. 6 in., brick.. } 2 ft. × 3 ft., brick }	Cost shown under Stony- brook conduit.	15,023 44
<i>Sewers built between February 1, 1897, and February 1, 1898, by the City, under Chapter 323 of the Acts of 1891, as amended by Chapter 418 of the Acts of 1892, or Special Acts referring thereto.</i>					
Boylston st.....	Fens to Brookline ave.....	.....	.....	Built in 1896.....	\$85 75
Bryant st.....	Huntington ave. and Parker st.....	{ 227.00 48.00 }	{ 12-in., pipe sewer..... } { 10-in., C. B. drain..... } { 4 catch-basins..... }	Built by contract, gravel refill	898 60

Fullerton st.....	Brookline ave. and Fairhaven st.....	465.00 30.65 499.05 36.19 533.00 560.53 4.00 1,146.39 369.25 111.96 1,663.92 1,714.94	18-in., pipe, sewer..... 12-in., pipe, sewer..... 12-in., pipe, C. B. drain.. 10-in., pipe, C. B. drain.. 6-in., pipe, house drain.. 4 catch-basins..... 2 ft. 6 in. X 3 ft., brick sewer..... In reducer..... 18-in., pipe, sewer..... 12-in., pipe, sewer..... 10-in., pipe, C. B. drain.. 6-in., pipe, house drain.. 15 catch-basins..... 2 ft. 6 in. X 3 ft., brick sewer.....	Built by contract.....	2,728 72
Parker, Norway and Turner sts.	.....	111.36 14.64	18-in., pipe, sewer..... 3 ft., circular brick, C. B. drain..... 3 ft. 6 in., circular brick, C. B. drain.....	Built by contract; piles.	10,622 25
Peterborough st..	Aubudon road and Audubon road.....	35.36	2 ft. 6 in. X 3 ft., brick sewer..... 18-in., pipe, sewer..... 3 ft., circular brick, C. B. drain.....	Piles; built by contract.	18,209 50
Ruggles st.....	Parker st. and Back Bay Fens.....	187.09 56.00	2 ft. 6 in. X 3 ft., brick sewer..... 18-in., pipe, sewer.....	Piles; built by contract.	7,269 64
Vancouver st.....	Ruggles st. and Huntington ave.....	249.55	2 ft. 6 in. X 3 ft., brick sewer.....	Piles; built by contract.	3,399 44

Roxbury.—*Continued.*
Boulevards.

LOCALITY.		Length in feet.	Dimensions and Material.	Remarks.	Expenditure during the fiscal year 1897-98.
Built in	Between				
Columbus ave., Sects. 4, 5, 6....	Northampton st. and Frank- lin park.....	120.00	{ 10-in., pipe, C. B. drain.. 5 catch-basins.....	 Cost of Sect. 7 shown under Columbus ave., Old Heath and Ritchie sts.....	\$8,836 19
Columbus ave., Sect. 7.....	Northampton st. and Frank- lin park.....	.....	.....	..... ..... .....	
Columbus ave., Sect. 8.....	Northampton st. and Frank- lin park.....	{ 325.71 268.29 289.03 20.00 33.30 42.00	{ 3 ft. 6 in. X 4 ft. 10 in., brick sewer..... 2 ft. 4 in. X 3 ft. 6 in., brick sewer..... 12-in., pipe, sewer..... 10-in., pipe, C. B. drain.. 8-in., pipe, house drain.. 6-in., pipe, house drain.. 5 catch-basins.....	{ Built by contract; much rock.....	
79 new catch-basins and 3 drop-inlets built, and catch-basin repairs.....					\$142,766 26
					13,959 12
					\$156,725 38

Surface Drains built between February 1, 1897, and February 1, 1898, by the City, either by Contract or Day Labor.

LOCALITY.		Length in feet.	Dimensions and Material.	Remarks.
Built in	Between			
Burke st.	Tremont st. and Columbus ave.	202.60	12-in. pipe, C. B. drain...	} Cost shown under special heading, Stony brook construction.
Stony brook	Stony brook gate-house and existing channel.	17.06	10-in. pipe, C. B. drain...	
		1,845.00	15 ft. 6 in. X 17 ft., brick,	
		207.00	10-in., pipe, sewer	
	Built in connection with Stony brook.	48.00	4-ft., iron pipe, sewer	
		24.00	5-ft., iron pipe, sewer	
		21.00	5-ft., circular brick, sewer	
		17.00	In bell-mouth.	
Sewers built between February 1, 1897, and February 1, 1898, by Private Parties.				
Arcola st.	Day st. and 335 feet westerly, South Huntington ave. and Cranford st.	334.55	12-in., pipe.	
Basswood st.	Jamaicaway and Day st.	424.60	10-in., pipe.	
Bynner st.	Tremont st. and Delle ave. ..	112.64	10-in., pipe.	
Carmel st.	Heath st. and Floyd st.	261.70	12-in., pipe.	
Cranford st.	Carmel st. and Burney st.	330.37	10-in., pipe.	
Delle ave.	Walnut ave. and Harrishof st.,	193.74	12-in., pipe.	
Dennison st.		639.00	12-in., pipe.	

Roxbury. — *Concluded.*

LOCALITY.		Length in feet.	Dimensions and Material.	Remarks.
Built in	Between			
Floyd st.....	South Huntington ave. and Cranford st.....	294.87	10-in., pipe.	
Gayland st.....	Existing sewer and West Cottage st.....	101.85	10-in., pipe.	
Haley st.....	Harrishof st. and Dennison st.,	282.70	12-in., pipe.	
Harold st.....	Walnut ave. and Munroe st. . .	197.00	12-in., pipe.	
Harrishof st.....	Walnut ave. and Dennison st.,	388.39	12-in., pipe.	
Iroquois st.	Calumet st. and 952 feet west- erly	952.90	12-in., pipe.	
Nazing st.....	Blue Hill ave. and Maple st. . .	702.00	15-in., pipe.	
South Huntington ave.....	Heath st. and Bynner st.	1,859.46	10-in., pipe.	
<i>Surface Drains built between February 1, 1897, and February 1, 1898, by Private Parties.</i>				
Basswood st.....	South Huntington ave. and Cranford st.....	{ 431.95 41.22	{ 12-in., pipe. 10-in., pipe. 2 catch-basins.	
Bynner st.	Jamaicaway and Day st.	{ 26.15 24.00	{ 15-in., pipe. 10-in., pipe. 10 catch-basins.	
Cranford st.	Heath st. and Floyd st.	{ 64.70 57.27	{ 12-in., pipe. 10-in., pipe. 3 catch-basins.	

City Proper.

Sewers built between February 1, 1897, and February 1, 1898, by the City, either by Contract or Day Labor.

City Proper.					
Sewers built between February 1, 1897, and February 1, 1898, by the City, either by Contract or Day Labor.					
LOCALITY.		Length in feet.	Dimensions and Material.	Remarks.	Expenditure during the fiscal year 1897-98.
Built in	Between				
Dennison st.	Walnut ave. and Harrishof st.,	34.00	10-in., pipe.		
Haley st.....	Harrishof st. and Dennison st.	23.00	10-in., pipe.		
Harrishof st.....	Walnut ave. and Dennison st..	34.00	10-in., pipe.		
South Huntington ave.....	Heath st. and Bynner st.	371.29 378.90 147.13	2 catch-basins. 15-in., pipe, 12-in., pipe. 10-in., pipe. 7 catch-basins.		
Atlantic ave.....	South Market st. and Commercial wharf.....	44.00 463.15 105.00	15-in., pipe..... 12-in., pipe..... 12-in., pipe.....	Built by contract.... } Old walls encountered)	\$3,847 39 440 48
Barton st..... Bothnia st. and Boylston st. ...	Cambria st. and Massachusetts ave.....	298.25	12-in., pipe.....	Built by contract.....	1,110 62
Court st. and Bulfinch st.....	End of old sewer and Bulfinch pl.....	.....	.....	Built in 1896.....	815 15

City Proper. — Continued.

LOCALITY.		Length in Feet.	Dimensions and Material.	Remarks.	Expenditure during the fiscal year 1897-98.
Built in	Between				
Canal-street relief sewer:					
In Central st...	Atlantic ave. and India st...	413.50	5 ft. × 5 ft. 3½ in., brick.		
In India st....	Central st. and State st....	237.09	2 ft. 4 in. × 3 ft. 6 in., brick		
In Commercial st.....	State st. and Clinton st.....	74.34	3 ft. 6 in. × 3 ft. 8½ in., brick		
In Clinton st....	Commercial st. and Blackstone st.....	423.50	2 ft. 4 in. × 3 ft. 6 in., brick	Rebuilding.....	\$20,988 25
Charles and Allen sts.....	Poplar st. and Brighton st...	118.00	5 ft. 6 in. × 5 ft. 9½ in., brick	Old sewers and old foundations encountered.....	
Malden st.	Existing sewer and Harrison ave.....	536.37	2 ft. 6 in. × 3 ft., brick....	Built by contract.....	15,462 72
South Market st..	Commercial st. and Merchant's row.....	7.50	18-in., pipe.....	Part on piles.....	4,044 52
South Russell st..	Cambridge st. and Myrtle st. Church st. and B. & A. R.R. bridge.....	411.26	12-in., pipe.....		746 51
Tremont st.....		250.00	15-in., pipe.....		
Unity st. and Webster ave.		250.00	12-in., pipe.....		2,863 65
Warren ave.				Built in 1896.....	45 61
Washington st...		121.00	12-in., pipe.....	Built by contract.....	736 97
Wiget st.....		97.94	12-in., pipe.....		
		3.00	12-in., circular, brick ...	Rebuilding.....	1,130 30
		526.69	15-in., pipe.....	Rebuilding.....	1,977 67
		285.27	12-in., pipe.....		
		247.61	18-in., pipe.....	Built by contract; rebuilding.....	1,119 59
					1,173 13

South Union Station.

Cove st.....		21.00 312.92 50.00 50.00 529.49 12.00	{ 	5 ft. X 5 ft. 3½-in., brick.. 4 ft. 3 in. X 4 ft. 6 in., brick, 3 ft. X 4 ft. 6 in., brick.. 2 ft. 8 in. X 4 ft., brick.. 3 ft. X 3 ft. 2½ in., brick.. In tide-gate, M. H. and re- ducer.....	\$27,580 70
Summer st. and Beach st....		19.00 33.00 22.00 14.34	{ 	18-in., pipe..... 12-in., pipe..... 6-in., iron pipe..... In regulator chamber and connection.....	
Mt. Washington ave., railroad yard and Kneeland st.....		669.19 494.00 78.00	{ 	2 ft. 8 in. X 4 ft. 6 in., brick, 6 ft. 8 in. X 6 ft. 8 in., brick.. 11 ft. X 4 ft. 4 in., brick.. }	34,460 43
Fort Point channel and South st.....		48.00	}	In reducers.....	
Fort Point channel and Cove st.....		685.00 15.00	{ }	5 ft. X 5 ft. 3½ in., brick.. In tide-gate chamber... }	21,847 78 4,095 68
Holidays and miscellaneous on South Union Station.....					
<i>Sewers built between February 1, 1897, and February 1, 1898, by the City, under Chapter 323 of the Acts of 1891, as amended by Chapter 418 of the Acts of 1892, or Special Acts referring thereto.</i>					
Clinton st.....	Commercial st. and Fulton st.			Built in 1896.....	19 27
Total					\$144,506 42
32 new catch-basins built, and catch-basin repairs.....					9,317 44
					\$153,823 86

City Proper. — Concluded.

Surface Drains built between February 1, 1897, and February 1, 1898, by the City, either by Contract or Day Labor.

LOCALITY.		Length in feet.	Dimensions and Material.	Remarks.
Built in.	Between.			
St. Botolph st. and Irvington st.... Summer st.....	Harcourt st. and Boston and Providence R.R.	535.54 56.00	18-in., pipe. 3 ft. X 3 ft., wood extension of outlet.	Built by contract. Built by contract.
<i>Sewers built between February 1, 1897, and February 1, 1898, by Private Parties.</i>				
Adams sq. Beacon st. and School st.	 At Tremont st.	78.50 20.00 32.00 30.00	2-ft., circular, brick. 18-in., steel and cement. 18-in., circular, brick. 15-in., pipe.	
Cornhill	Adams sq. and Court st.	186.00	12-in., pipe.	
Hanover st.	Near Court st.	72.00	10-in., pipe.	
Hanover st. and Tremont row...	.....	55.00	12-in., pipe.	
Sears st. ....	.....	419.00	18-in., pipe.	
Tremont st.	Central Wharf and India st.	221.55	12-in., pipe.	
Tremont st.	Hollis st. and Common st.	72.00	10-in., pipe.	
Tremont row	Pemberton sq. and School st. Northerly from Pemberton sq.	113.50	12-in., pipe.	
Washington st.	Elm st. and Hanover st.	43.00 57.00	2-ft., circular, brick. 2-ft., circular, brick.	
Washington st.	Elm st. and Brattle st.	273.00 150.70	18-in., pipe. 12-in., pipe.	

**Work done for and paid by Paving Division, including new
Catch-basins, Manholes and Repairs.**

Street Department, Paving Division	\$304 33
Congress and L streets	11 32
Quincy street, Ward 4, laying out and construction,	16 31
State street, paving	125 70
Washington street, from Eliot to Dover, paving .	138 97
Street Improvements, Ward 1	148 16
“ “ “ 2	211 36
“ “ “ 3	19 48
“ “ “ 4	21 38
“ “ “ 13	445 34
“ “ “ 14	247 87
“ “ “ 15	147 13
“ “ “ 16	382 66
“ “ “ 18	268 55
“ “ “ 19	829 54
“ “ “ 22	591 28
“ “ “ 25	82 76

\$3,992 14

RECAPITULATION.

NEW SEWERS.

South Boston	\$61,577 49
East Boston	31,850 87
Charlestown	24,175 81
Brighton	68,452 24
West Roxbury	64,384 20
Dorchester	170,245 33
Roxbury	142,766 26
City Proper	144,506 42
	\$707,958 62

CATCH-BASINS.

South Boston	\$3,994 52
East Boston	2,447 77
Charlestown	637 02
Brighton	9,964 15
West Roxbury	2,105 15
Dorchester	4,234 44
Roxbury	13,959 12
City Proper	9,317 44
	46,659 61
Improved Sewerage Maintenance	116,298 61
Pumping Station, Forest-avenue section	7,585 01

Carried forward,

\$878,501 85

<i>Brought forward,</i>		\$878,501 85
Stony Brook Maintenance		13,798 55
Stony Brook Construction		260,741 16
Miscellaneous		318,336 01
		\$1,471,377 57
Less decrease in stock	\$2,986 94	
Less water charged to sewer construction	4,033 40	
		7,020 34
		<u>\$1,464,357 23</u>

**Summary of Sewer Construction for the Twelve Months ending
January 31, 1898.**

DISTRICT.	Built by the City by Contract or Day Labor. <i>Feet.</i>	Built by Private Parties. <i>Feet.</i>	Total length built during the 12 months ending Jan. 31, 1898. <i>Feet.</i>
City	8,557.95	1,823.25	10,381.20
East Boston	2,380.24	2,639.54	5,019.78
Charlestown	818.35	.....	818.35
South Boston	4,855.27	909.63	5,764.90
Roxbury	20,414.43	8,709.38	29,123.81
West Roxbury	14,012.18	2,867.43	16,869.61
Dorchester	65,558.95	14,918.44	80,477.39
Brighton	17,727.56	7,101.47	24,829.03
 Total	 134,324.93	 38,969.14	 173,294.07

412 new catch-basins built.

941,467 linear feet sewers flushed.

806 cubic yards material removed from sewers.

6,655 catch-basins cleaned.

There are now 474.96 miles of sewers in charge of the Sewer Division.

The amount expended by this division during the twelve months ending January 31, 1898, including the amount spent under special appropriations was \$1,464,357.23.

**Schedule of Sewers built to date in the City of Boston,
February 1, 1898.**

DISTRICTS.	Total length built during the 12 months ending Jan. 31, 1898.	Length rebuilt during the 12 months ending Jan. 31, 1898.	Additional length for 12 months ending Jan. 31, 1898.	
	<i>Feet.</i>	<i>Feet.</i>	<i>Feet.</i>	<i>Miles.</i>
City	9,712.01	5,226.00	4,486.01	0.85
East Boston.....	5,019.78	—	5,019.78	0.95
Charlestown.....	818.35	346.00	472.35	0.09
South Boston.....	5,764.90	1,395.80	4,369.10	0.83
Roxbury	29,123.81	4,116.00	25,007.81	4.74
West Roxbury.....	16,879.61	—	16,879.61	3.20
Dorchester	80,477.39	—	80,477.39	15.24
Brighton	24,829.03	253.95	24,575.08	4.65
Totals.....	172,624.88	11,337.75	161,287.13	30.55
Length built previous to January 31, 1897.....				
Total.....				420.28
Length of intercepting sewer.....				
Total.....				24.13
Total.....				474.96

Rainfall. — Albany-street Yard.*Rainfall from February 1, 1897, to January 31, 1898.*

DATE.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	January.
1.....												
2.....		.05						.80		2.05		
3.....	.22		1.11									
4.....				.34								
5.....					.16		.65			.10	.37	
6.....		.26	.25									
7.....	.93											
8.....			.74								.12	
9.....	.40									.45		
10.....			1.92	.40								
11.....					2.35		.53	.06				
12.....	.10								.33	2.11	.30	
13.....	.15					.85		.31				
14.....		.25		.30	.30							
15.....			.30									
16.....								.25				
17.....							.42			.60		
18.....							.50					
19.....												
20.....					.42	.26		.75				
21.....		.80										1.40
22.....				.25		1.31	.90					
23.....	.71									.31		.61
24.....		1.10				.50	1.58	.97				
25.....				.50								
26.....								.07				.78
27.....										.33		
28.....			.12									
29.....						1.60				.11		
30.....					.88							
31.....				.41							1.46	
Totals.....	2.19	2.78	3.73	3.31	4.11	4.52	4.58	3.71	.33	6.16	2.22	2.79

NOTE. — Total rainfall for twelve months ending January 31, 1898, 39.43 inches.

Street Department — Sewer Division — Pumping-Station, Dorchester.

Report of Pumping done during the Year 1897.

	ENGINE NO. 1.		ENGINE NO. 2.		ENGINE NO. 3.		ENGINE NO. 4.		Total gallons pumped.	Daily average amount pumped.	Daily average amount of coal used.	Per cent. of ashes and clinkers.	Gallons pumped per pound of coal used.	Average lift.	Duty in fr.-lbs. per 100 pounds coal used.	Rainfall.
	Pumping time.	Gallons pumped.	Pumping time.	Gallons pumped.	Pumping time.	Gallons pumped.	Pumping time.	Gallons pumped.								
1897.	H. M.		H. M.		H. M.		H. M.									
February..	16 00	19,212,198	447 29	509,073,502	634 40	948,051,416	663 10	901,090,612	2,447,428,442	87,408,158	32,478	10	2,680	33.4	80,429,809	0.62
March.....	170 05	215,259,799	323 25	465,371,536	683 50	1,078,085,422	673 45	991,149,061	2,740,865,818	88,705,350	35,404	10	2,505	36.2	75,362,780	1.24
April.....	561 45	709,187,255	636 55	791,174,243	145 30	179,318,469	713 02	1,016,100,753	2,695,780,720	80,183,225	42,123	10	2,134	34.5	63,799,929	3.00
May.....	229 10	293,801,372	59 25	79,574,667	774 00	1,073,592,025	713 25	1,043,080,720	2,490,057,784	80,356,702	26,664	10	2,937	35.3	89,697,071	4.04
June.....	397 15	507,784,480	.....	.....	711 00	1,003,998,582	793 00	944,788,967	2,456,572,029	81,885,906	27,686	7	2,957	34.7	87,120,279	4.11
July.....	419 30	554,756,359	30 30	39,170,446	736 00	1,042,022,274	473 43	652,684,780	2,288,633,859	75,834,302	28,080	7	2,629	34.9	81,601,078	4.52
August....	179 20	235,777,537	117 00	139,963,109	738 00	1,046,702,816	725 10	1,002,855,825	2,445,299,287	79,324,880	26,096	10	2,103	35.1	89,728,678	1.78
September,	81 59	111,486,785	49 15	89,364,838	653 35	982,805,495	632 37	915,895,487	2,099,572,605	70,019,086	23,565	7	2,462	35.7	80,531,358	2.56
October....	17 05	21,577,016	47 23	64,171,633	706 40	1,059,207,673	667 48	862,734,428	2,007,650,750	61,538,411	20,467	8	2,131	35.7	91,817,397	3.71
November,	196 31	247,877,239	206 35	279,106,743	706 30	1,028,014,614	634 35	878,914,667	2,433,913,263	81,130,442	28,480	11	2,848	35.3	83,843,331	5.16
December,	608 20	840,411,393	518 13	731,515,701	122 00	183,220,333	738 46	1,050,979,877	2,806,157,304	90,520,558	30,061	7	2,378	35.4	71,259,555	3.86
1898.																
January...	112 20	192,833,427	270 04	368,739,096	730 20	1,027,325,659	734 50	1,007,845,648	2,526,743,830	81,507,768	29,140	10	2,796	35.1	89,375,029	1.40
Totals.....	2,989 20	3,879,965,580	2,706 04	3,647,215,514	7,362 42	10,632,354,778	8,163 51	11,268,129,825	29,447,695,697	965,414,789	350,244	107	33,050	421.3	987,566,894	36.00
Averages..	.....	.....	.....	.....	.....	.....	.....	.....	.....	80,451,122	28,111,811	2,754	.....	35.1	82,288,810	.....

Pumping-Station.

Record of sludge received and removed from sewer and tank for twelve (12) months, ending January 31, 1898.

MONTH.	Received.	Removed.	Screenings received from Filtl Hoist and towed down the Harbor.
February	387 yards.	170 yards.	72 yards.
March	308 "	255 "	144 "
April	335 "	425 "	144 "
May	580 "	680 "	144 "
June	565 "	425 "	
July	850 "	765 "	72 "
August	795 "	765 "	216 "
September	565 "	425 "	216 "
October	660 "	765 "	
November	755 "	680 "	
December	840 "	510 "	
January 31, 1898	624 "	425 "	
Total	7,564 "	6,290 "	1,008 "

PROPERTY IN CHARGE OF THE SEWER DIVISION.

Sewer yard, with buildings, at 678 Albany street, South End.

Sewer yard, with building, on North Grove street, West End.

Sewer yard, on Gibson street, Dorchester, with buildings.
This is Gibson School-fund land. The buildings were erected by
the Sewer Department.

Gate-house on Stony brook, Pyncheon street, Roxbury, built in
1889.

Sewer yard, with buildings, on Rutherford avenue, Charles-
town.

Sewer yard, with buildings, corner Paris and Marion streets,
East Boston.

Sewer yard, with buildings, on Massachusetts avenue, near Al-
bany street, South End.

Sewer yard, with buildings, on Western avenue, Brighton.

Sewer yard, with buildings, on Revere street, West End.

Sewer yard, with buildings, II and Ninth streets, South Boston.

Sewer yard, with buildings, Childs and South streets, West
Roxbury.

Land and buildings at pumping-station, Old Harbor Point,
with roadway (Mt. Vernon street).

Land, buildings and reservoirs at Moon Island and Squantum.

**Summary of Sewer Construction for Five Years previous to
February 1, 1898.**

	1893.	1894.	1895.	1896.	1897.
	Feet.	Feet.	Feet.	Feet.	Feet.
Built by City by contract or day labor.....	66,400.85	90,802.77	139,200.09	116,008.25	134,324.93
Built by private parties.....	22,837.94	24,877.05	36,287.35	37,825.92	38,969.14
Total number of feet built.....	89,237.09	115,679.82	175,487.44	153,834.17	173,294.70

DETAILS OF COST AND CONSTRUCTION

are given of the following sewers which have been constructed during the year at a cost exceeding two thousand (2,000) dollars each :

B Street.

Labor	\$2,391 86
-----------------	------------

B and Seventh-Street Outlet.

Labor	\$6,692 19
Brick	1,606 75
Derrick hire	1,018 60
Engine and pump hire	1,106 00
Supporting track	824 55
Lumber	728 83
Cement	773 85
Sand	526 52
Gravel	623 05
Filling	264 30
Teaming	674 00
Screenings	558 75
Dredging	525 00
Coal	289 77
Pipe	32 76
Blacksmithing	90 21
Pile driving	1,128 00
Carpentry	222 86
Water	88 80
Miscellaneous	337 09

Carried forward,

\$18,111 88

<i>Brought forward,</i>	\$18,111 88
Paving	61 96
Watchman	271 50
Two five-foot tide gates	243 74
Stone curbing	50 00
	\$18,739 08

Dorchester Avenue and D Street, South Boston.

Labor	\$12,276 49
Brick	3,137 88
Teaming	1,916 75
Engine hire	1,458 00
Gravel	1,051 93
Screenings	1,145 16
Sand	970 41
Cement	969 85
Lumber	611 23
Paving	684 63
Carpentry	526 67
Trench machine	556 67
Watchman	327 75
Blacksmithing	212 00
Water	114 33
Pipe	306 18
Repairing engine	60 10
Rubber goods	38 52
Canvas	84 20
Street-Cleaning Division	37 50
Iron castings	31 80
Coal	190 20
Miscellaneous	60 94
	\$26,769 19

Dorr Street.

Labor	\$2,893 74
Brick	277 61
Trench machine	280 00
Gravel	223 50
Engine hire	196 00
Carpentry	191 50
Sand	184 06
Teaming	144 00
Cement	97 00
Screenings	74 50
Pipe	56 96
Coal	34 40

Carried forward,\$4,653 27

<i>Brought forward,</i>	\$4,653 27
Blacksmithing	31 05
Lumber	29 49
Iron castings	6 40
Water	3 14
	\$4,723 35

H Street, between Eighth Street and Tidewater.

Labor	\$444 70
Pipe	77 66
Advertising and printing	74 57
Tide gates	61 52
Castings	29 45

Michele Russo, Contractor.

300 lin. ft., earth excavation, at \$1.75 . . .	\$525 00
75 cu. yds. brick masonry (American cement mortar), at \$7	525 00
20 cu. yds. brick masonry, Portland cement mortar, at \$9	180 00
110 cu. yds. concrete, at \$4	440 00
12 M. ft. B. M. spruce lumber (plat- form), at \$28	336 00
7 M. ft. B. M. spruce lumber (sheet- ing), at \$13	91 00
205 lin. ft. 8-in. pipe, underdrain, at 1c. . .	2 05
140 cu. yds. rock, at \$5	700 00
	\$2,799 05
Less amount retained	419 86
	2,379 19
	\$3,067 09

Ashley Avenue, between Bennington and Breed Streets.

Labor	\$208 70
Cement	588 50
Brick	696 05
Pipe	40 62
Printing and advertising	74 11
Iron castings	37 63

J. P. O'Connell, Contractor.

728.16 lin. ft. earth excavation, for brick sewer, at \$2.50	\$1,820 40
2.60 cu. yds. earth excavation below grade, at 10 cents	26
<i>Carried forward,</i>	\$1,820 66
	\$1,645 61

<i>Brought forward,</i>	\$1,820 66	\$1,645 61
148.09 cu. yds. brick masonry (American cement mortar), at \$4.75	703 43	
151.82 cu. yds. concrete in place, at \$4	607 28	
8.98 M. ft. (B.M.) spruce in place, at \$25	224 50	
0.655 M. ft. sheeting left in place, at 10 cents	07	
728.00 lin. ft. 8-in. pipe, laid as underdrain, at 15 cents	109 20	
59.00 pipe connections in brick sewer, at 10 cents	5 90	
2.60 cu. yds. gravel refill, at 10 cents	26	
	\$3,471 30	
Less 200 lin. ft. 8-in. pipe, furnished by city, at \$0.144	28 80	
	\$3,442 50	
Less amount retained	172 13	
		3,270 37
		\$4,915 98

Connection Metropolitan Sewer, Border and Decatur Streets.

Labor	\$1,827 77
Regulator	347 22
Teaming	308 00
Brick	233 00
Cement	189 20
Lumber	137 01
Coal	137 08
Engine hire	151 00
Engineer	162 50
Gravel	106 43
Carpentry	120 44
Miscellaneous	196 39
Pipe	56 69
Iron castings	24 64
Sand	24 53
Oil	14 25
	\$4,036 15

Connection Metropolitan Sewer, Border and Eutaw Streets.

Labor	\$1,818 57
Regulator	371 71
Teaming	231 00
Brick	189 10
Cement	131 73
Lumber	78 47
Paving	51 89
Sand	25 12
Coal	30 84
Iron work	11 20
Carpentry	39 38
Gravel	75 60
Drain pipe	28 40
Iron pipe	19 70
Engine hire	68 00
Rubber goods	22 98
Miscellaneous	5 26
Blacksmithing	9 02
	\$3,207 97

Connection Metropolitan Sewer, Border and Lexington Streets.

Labor	\$2,170 00
Lumber	144 35
Cement	126 22
Sand and gravel	24 15
Brick	183 50
Pipe	68 89
Regulator	382 71
Teaming	269 25
Coal	25 38
Engine hire	64 00
Carpentry	31 20
Paving	46 62
Manhole steps	10 15
Water Department	18 40
Miscellaneous	55 96
	\$3,620 78

Connection Metropolitan Sewer, Maverick and Cottage Streets.

Labor	\$1,697 67
Regulator	403 75
Engine hire	262 00
Teaming	235 50

Carried forward, **\$2,598 92**

<i>Brought forward,</i>	\$2,598 92
Brick	193 71
Lumber	154 13
Cement	87 60
Coal	42 57
Drain pipe	16 57
Water pipe	16 52
Sand and gravel	43 02
Iron work	13 30
Miscellaneous	13 42
	\$3,179 76

Connection Metropolitan Sewer, Maverick and Jeffries Streets.

Labor	\$1,632 14
Regulator	408 75
Brick	207 17
Cement	136 13
Teaming	257 25
Engine hire	209 00
Lumber	78 85
Drain pipe	38 87
Coal	40 29
Sand and gravel	29 12
Iron work	7 70
Miscellaneous	75 88
Iron pipe	21 40
	\$3,142 55

Connection Metropolitan Sewer, Maverick and Lamson Streets.

Labor	\$1,964 97
Engine hire	141 50
Teaming	154 50
Cement	91 40
Lumber	96 27
Brick	172 75
Pipe	43 06
Miscellaneous	43 63
	\$2,708 08

Connection with Metropolitan Sewer, Sumner and New Streets.

Labor	\$1,739 54
Regulator	402 75
Team	251 50
<i>Carried forward,</i>	\$2,393 79

<i>Brought forward,</i>	\$2,393 79
Brick	205 60
Lumber	126 53
Engine hire	95 00
Engineer	32 50
Cement	127 32
Gravel	26 42
Paving	29 13
Castings	16 10
Pipe	20 35
Sand	13 83
Miscellaneous	28 54
	\$3,115 11

**Connection Metropolitan Sewer, Chelsea and Vine Streets,
Charlestown.**

Labor	\$1,250 78
Cement	161 70
Brick	428 96
Pipe	32 04
Regulator	424 44
Sand, gravel and screenings	115 85
Teaming	206 00
Curbstone	50 00
Carpentry	33 64
Iron work	16 80
Lumber	24 21
Miscellaneous	60 32
Coal	13 19
	\$2,817 93

Connection Metropolitan Sewer, Medford and Chelsea Streets.

Labor	\$2,942 43
Brick	279 58
Engine and derrick hire	275 00
Teaming	443 00
Cement	126 50
Regulator	371 38
Lumber	105 84
Blacksmithing	58 02
Pipe	63 24
Iron work	27 39
Coal	42 50
Sand	17 10
Miscellaneous	41 39
	\$4,793 37

**Connection with Metropolitan Sewer, Rutherford Avenue, near
Miller Street.**

Labor	\$6,096 62
Engine hire	1,113 78
Teaming	708 50
Regulator	571 62
Brick	752 90
Cement	457 10
Coal	334 10
Pipe	144 65
Paving	103 62
Gravel	97 00
Sand	48 07
Rubber goods	42 70
Blacksmithing	42 50
Iron work	16 80
Miscellaneous	51 08
Lumber	470 54

\$11,051 58

**Rutherford Avenue, between Outlet and Chapman Street,
Charlestown.**

Labor	\$3,623 65
Teaming	407 00
Coal	101 32
Lumber	93 85
Engine hire	180 00
Gravel	42 50
Sand	34 50
Pipe	27 50
Cement	66 00
Miscellaneous	21 61

\$4,597 93

**Berwick Road, between Commonwealth Avenue and Chiswick
Road.**

Labor	\$87 27
Iron castings	24 10

Thomas J. Young & Co., Contractors.

396.33 cu. yds. rock excavation, at \$4	\$1,585 32
424.43 lin. ft. 12-in., pipe, at \$1.85	785 20

2,370 52

\$2,481 89

Brooks Street, between Faneuil and Bigelow Streets.

Labor	\$1,558 30
Pipe	405 83
Brick	110 00
Teaming	99 00
Iron work	45 10
Cement	35 25
Powder	15 65
Sand	10 80
Blacksmithing	18 27
Miscellaneous	14 00
Water	84 91
	\$2,397 11

Cambridge Street, No. 2, Seattle to North Harvard Street.

Labor	\$2,273 03
Brick	149 62
Teaming	101 50
Engine and pump hire	66 00
Hose	45 48
Coal	14 94
Supplies	2 28
	\$2,652 85

Cambridge Street, No. 1, Seattle Street to Charles River.

Labor	\$2,224 51
Lumber	298 72
Teaming	147 50
Brick	199 00
Cement	99 00
Carpentry	84 82
Plumbing	78 30
Pipe	75 90
Engine hire	82 00
Trench machine	20 00
Blacksmithing	9 75
Miscellaneous	7 82
Coal	14 94
	\$3,342 26

Dunboy Street.

Labor	\$2,640 02
Trench machine	144 00
Pipe	638 29
<i>Carried forward,</i>	\$3,422 31

<i>Brought forward,</i>										\$3,422 31
Teaming	.	.	.	.	.	.	.	.	.	180 00
Engine hire	.	.	.	.	.	.	.	.	.	72 00
Brick	.	.	.	.	.	.	.	.	.	140 00
Sand	.	.	.	.	.	.	.	.	.	13 98
Iron work	.	.	.	.	.	.	.	.	.	46 30
Cement	.	.	.	.	.	.	.	.	.	36 70
Water pipe	.	.	.	.	.	.	.	.	.	130 61
Miscellaneous	.	.	.	.	.	.	.	.	.	42 62
Coal	.	.	.	.	.	.	.	.	.	36 19
										\$4,120 71

Newton Street and Private Land.

Labor	.	.	.	.	.	.	.	.	.	\$2,139 78
Pipe	.	.	.	.	.	.	.	.	.	374 43
Trench machine	.	.	.	.	.	.	.	.	.	208 00
Brick	.	.	.	.	.	.	.	.	.	153 00
Cement	.	.	.	.	.	.	.	.	.	70 20
Teaming	.	.	.	.	.	.	.	.	.	172 00
Iron work	.	.	.	.	.	.	.	.	.	90 10
Engine hire	.	.	.	.	.	.	.	.	.	92 59
Blacksmithing	.	.	.	.	.	.	.	.	.	50 10
Coal	.	.	.	.	.	.	.	.	.	76 80
Sand	.	.	.	.	.	.	.	.	.	18 00
Water	.	.	.	.	.	.	.	.	.	190 59
Miscellaneous	.	.	.	.	.	.	.	.	.	10 10
										\$3,645 69

Rockland Street, Mt. Vernon Avenue to Jackson Street.

Labor	.	.	.	.	.	.	.	.	.	\$234 29
Pipe	.	.	.	.	.	.	.	.	.	78 48
Cement	.	.	.	.	.	.	.	.	.	9 05
Iron work	.	.	.	.	.	.	.	.	.	8 98
Coal	.	.	.	.	.	.	.	.	.	7 42

T. J. Young & Co., Contractors.

235	lin. ft. 12 in., pipe, at \$1.05	.	.	.	.	.	.	.	.	\$246 75
1	manhole, at \$40	.	.	.	.	.	.	.	.	40 00
279	cu. yds. rock excavated, at \$5.00	.	.	.	.	.	.	.	.	1,395 00
										1,681 75
										\$2,019 97

Sidlaw Road.

Labor	.	.	.	.	.	.	.	.	.	\$3,385 18
Pipe	.	.	.	.	.	.	.	.	.	147 90
Teaming	.	.	.	.	.	.	.	.	.	142 50

Carried forward,

\$3,675 58

<i>Brought forward,</i>	\$3,675 58
Powder and fuse	108 56
Brick	54 20
Cement	14 90
Castings	17 80
Sand	6 36
Water	39 77
Oil	1 80
Blacksmithing	66 88
	\$3,985 85

Strathmore Road, between Sutherland Road and Commonwealth Avenue.

Labor	\$1,513 09
Pipe	305 77
Teaming	105 50
Brick	87 00
Castings	55 19
Cement	34 25
Water	96 25
Sand	11 13
Blacksmithing	12 79
Miscellaneous	1 20
	\$2,222 17

Salt Creek Outlet.

Labor	\$1,959 06
Pile driving	1,287 02
Cement	570 40
Expanded metal	296 80
Bolts, etc.	213 00
Paving	498 00
Sand	178 08
Teaming	127 00
Brick	70 00
Gravel	19 08
Blacksmithing	6 02
Iron work	2 80
Coal and oil	3 09
	\$5,230 35

Union Street, between Shepard and Winship Streets.

Labor	\$2,112 54
Pipe	111 27
Powder and fuse	119 20
<i>Carried forward,</i>	\$2,343 01

<i>Brought forward,</i>										\$2,343 01
Brick	.	.	.	.	.	.	.	.	.	40 00
Cement	.	.	.	.	.	.	.	.	.	12 50
Blasting logs	.	.	.	.	.	.	.	.	.	20 00
Iron work	.	.	.	.	.	.	.	.	.	12 80
Water	.	.	.	.	.	.	.	.	.	29 75
Teaming	.	.	.	.	.	.	.	.	.	42 50
Blacksmithing	.	.	.	.	.	.	.	.	.	44 73
Miscellaneous	.	.	.	.	.	.	.	.	.	9 68
										\$2,554 97

Washington Street, Nantasket to Commonwealth Avenue.

Labor	.	.	.	.	.	.	.	.	.	\$3,267 96
Pipe	.	.	.	.	.	.	.	.	.	345 01
Trench machine	.	.	.	.	.	.	.	.	.	191 33
Teaming	.	.	.	.	.	.	.	.	.	227 50
Lumber	.	.	.	.	.	.	.	.	.	93 41
Engine hire	.	.	.	.	.	.	.	.	.	70 00
Coal	.	.	.	.	.	.	.	.	.	70 74
Iron castings	.	.	.	.	.	.	.	.	.	35 00
Blacksmithing	.	.	.	.	.	.	.	.	.	24 86
Canvas	.	.	.	.	.	.	.	.	.	47 50
Rubber goods	.	.	.	.	.	.	.	.	.	11 25
Cement	.	.	.	.	.	.	.	.	.	10 00
Oil	.	.	.	.	.	.	.	.	.	9 63
										\$4,404 19

Western Avenue, Everett Street to North Harvard Street.

Labor	.	.	.	.	.	.	.	.	.	\$1,681 96
Pipe	.	.	.	.	.	.	.	.	.	1,618 69
Brick	.	.	.	.	.	.	.	.	.	117 25
Water	.	.	.	.	.	.	.	.	.	149 94
Iron work	.	.	.	.	.	.	.	.	.	59 60
Cement	.	.	.	.	.	.	.	.	.	52 50
Blacksmithing	.	.	.	.	.	.	.	.	.	22 81
Teaming	.	.	.	.	.	.	.	.	.	43 50
Sand	.	.	.	.	.	.	.	.	.	11 13
Miscellaneous	.	.	.	.	.	.	.	.	.	9 50
										\$3,766 88

Commonwealth Avenue Outlet at Lake Street.

Printing and advertising	.	.	.	.	.	.	.	.	.	\$56 71
Labor and inspection	.	.	.	.	.	.	.	.	.	1,461 62
Teaming	.	.	.	.	.	.	.	.	.	17 50

Carried forward, \$1,535 83

<i>Brought forward,</i>	\$1,535 83
Lumber	16 25
Drain pipe	1,146 47
Iron castings	101 70
Cement	1,620 85
Iron water-pipe	172 28
Bricks	2,452 00
Miscellaneous	14 92

Edward McHale & Co., Contractors.

1,760.79 lin. ft. earth excavation for brick sewer, at 40 cents	\$704 32
24 cu. yds. earth excavation, below grade, at 80 cents	19 20
493.93 cu. yds. rock excavation below grade, at \$2	987 86
533.73 cu. yds. concrete in place, at \$4	2,134 92
309.82 cu. yds. brick masonry (Amer- ican cement mortar), at \$4.20	1,301 24
116.42 cu. yds. brick masonry (Port- land cement mortar), at \$5	582 10
1,864 lin. ft. 6-in., underdrain, at 15 cents	279 60
289.39 lin. ft. 18-in., house sewer, at 50 cents	144 70
1,171.30 lin. ft. 12-in., house sewer, at 50 cents	585 65
169 lin. ft. 15-in., surface drain, at 35 cents	59 15
1,117.69 lin. ft. 12-in., surface drain, at 35 cents	391 19
48.95 M. ft. B. M. spruce sheeting left in place, at \$30	1,468 50
19.148 M. ft. B. M. spruce platform, and cradling left in place, at \$30	574 44
63.47 cu. yds. gravel refill, at 50 cents	31 73

\$9,264 60

Extra teaming, labor and concrete . 349 63

\$9,614 23

Less amount retained 192 06

9,422 17

\$16,482 47

Florence Street.

Labor	\$21,556 23
Pipe	3,871 59

Carried forward, \$25,427 82

Walk Hill and Bourne Streets.

Labor	\$4,722 82
Teaming	575 00
Pipe	103 33
Blacksmithing, etc.	284 57
Powder	264 73
Brick	86 18
Cement	25 20
Water	114 82
Iron work	42 50
Coal	23 89
Oil	16 90
Miscellaneous	79 42
	\$6,339 36

Washington Street, Forest Hills to Boylston Street.

Labor	\$2,790 06
Pipe	223 51
Teaming	226 50
Blacksmithing	96 06
Brick	77 00
Cement	20 70
Rubber goods	51 36
Iron work	27 40
Powder and caps	32 68
Water	54 55
Miscellaneous	15 02
Lumber	33 22
	\$3,648 06

Chapman Avenue, between Tucker and Lyons Streets.

Labor	\$223 43
Pipe	348 61
Iron castings	64 20
Cement	28 00
Advertising	31 00

Thomas H. Connelly, Contractor.

648.30 cu. yds. rock excavation, at \$3	\$1,944 90
855 lin. ft. 12 in., pipe house sewer, at 40 cents	342 00

<i>Carried forward,</i>		
	\$2,286 90	\$695 24

<i>Brought forward,</i>	\$2,286 90	\$695 24
430 lin. ft. 6 in., pipe underdrain, at 15 cents	64 50	
5 manholes on pipe sewer, at \$30	150 00	
	\$2,501 40	
Less amount retained	375 21	
		2,126 19
		\$2,821 43

Coffey and Ashmont Streets.

Labor	\$154 28
Advertising	17 25
Pipe	620 55
Cement	82 50
Iron work	87 75

Quimby & Ferguson, Contractors.

325 lin. ft. 15-in., pipe house sewer, at \$1.158	\$376 35	
1,067 lin. ft. 12-in., pipe house sewer, at \$1.158	1,235 59	
100 lin. ft. 6-in., pipe underdrain, at 1 cent	1 00	
6 manholes, at \$27	162 00	
1 pipe chimney, at \$2.50	2 50	
	\$1,777 44	
Less amount retained	266 62	
		1,510 82
		\$2,473 15

Evans Street, Morton Street to Existing Sewer.

Labor	\$142 20
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J. P. O'Connell, Contractor.

522.77 cu. yds. rock excavation, at \$4.50	\$2,352 47	
565 lin. ft. 12-in., pipe house sewer, at \$1.50	847 50	
3 manholes on pipe sewers, at \$40	120 00	
	\$3,319 97	
Less amount retained	498 00	
		2,821 97
		\$2,964 17

Forest Avenue, Sections Nos. 2 and 3.

Labor	\$7,988 52
Pipe	1,101 79
Teaming	417 50
Lumber	257 17
Blacksmithing	281 70
Brick	292 25
Water	257 81
Rubber goods	193 65
Powder	118 91
Supporting track	105 34
Castings	100 85
Cement	97 78
Blasting logs	80 00
Iron pipe	88 60
Engine hire	50 00
Sand	24 62
Coal	20 88
Tools	10 84

\$11,488 21

Forest Avenue, Section No. 4.

Labor	\$3,932 63
Pipe	603 01
Teaming	216 00
Brick	109 88
Lumber	140 14
Water	154 52
Cement	65 65
Blacksmithing	66 46
Iron work	66 35
Gravel	24 50
Sand	18 12
Rubber goods	193 65

\$5,590 91

Grampian Way.

Labor	\$256 42
Pipe	183 27
Cement	13 20
Iron work	23 08

J. P. O'Connell, Contractor.

548.85 lin. ft. 12-in., pipe, at 50 cents,	\$274 43
3 manholes, at \$30	90 00
518.42 cu. yds. rock excavated, at \$3.80	1,970 00

2,334 43

\$2,810 40

Leedsville Street.

Pipe	\$543 63
Labor	93 58
Iron castings	47 43
Cement	36 30
Advertising	23 25
Teaming	5 00

Daniel E. Lynch, Contractor.

598.25 lin. ft. 12-in., pipe, at 50 cents,	\$299 13
2 manholes, at \$30	60 00
1 pipe chimney, at \$10	10 00
8.33 cu. yds. rock excavation, at \$3.50,	29 16

Extra work, per order Superintendent
of Streets:

480 lin. ft. old culvert removed, at \$1	480 00
133.33 cu. yds. extra excavation, at 60 cents	80 00
594.64 lin. ft. 18-in., pipe surface drain, at 56 cents	333 00
1 catch-basin, at \$45	45 00
159 lin. ft. 6-in., pipe house connection, at 65 cents	103 35
13 lin. ft. 6-in., pipe house connection, at \$1	13 00
3 cu. yds. rock excavation, at \$5	15 00
Extra work, per order Superintendent of Streets	29 04

\$1,496 68

Less amount retained 73 38

1,423 30

\$2,172 49

Private Land, Jones and Mascot Avenues.

Labor	\$2,377 53
Lumber	57 15
Pipe	72 78
Teaming	55 00
Iron castings	12 80
Sand	4 50
Cement	2 00

\$2,581 76

Neponset Avenue.

Labor	\$3,144 57
Pipe	534 40
Lumber	212 92
Pile driving	602 00
Teaming	206 50
Water	131 04
Brick	99 25
Blacksmithing	77 80
Castings	54 85
Cement	44 60
Iron pipe	29 40

 \$5,137 33

Less sand excavated from trench, 20 double
loads, at \$1.50 30 00

 \$5,107 33

Newhall Street and Newhall Avenue.

Labor	\$1,217 20
Pipe	448 99
Water	132 63
Brick	92 15
Teaming	63 00
Iron castings	48 99
Cement	29 00
Repairs	17 35
Blacksmithing	7 92
Sand	4 50

 \$2,061 73

Percival Avenue.

Labor	\$3,533 55
Pipe	241 08
Blacksmithing	248 45
Powder and fuse	315 63
Teaming	230 50
Hardware	193 78
Water	82 73
Blasting logs	80 00
Brick	42 00
Coal	28 68
Iron castings	25 00
Boiler	22 00

Carried forward, \$5,043 40

<i>Brought forward,</i>										\$5,043 40
Cement	.	.	.	.	.	.	.	.	.	23 58
Hose .	.	.	.	.	.	.	.	.	.	19 78
Glass .	.	.	.	.	.	.	.	.	.	16 75
Sand .	.	.	.	.	.	.	.	.	.	9 83
Gravel	.	.	.	.	.	.	.	.	.	5 72
										<u>\$5,119 06</u>

Pierce Avenue.

Labor	.	.	.	.	.	.	.	.	.	\$1,316 50
Pipe .	.	.	.	.	.	.	.	.	.	520 31
Water	.	.	.	.	.	.	.	.	.	137 06
Brick	.	.	.	.	.	.	.	.	.	93 00
Pile driving	.	.	.	.	.	.	.	.	.	90 00
Iron work .	.	.	.	.	.	.	.	.	.	56 65
Lumber	.	.	.	.	.	.	.	.	.	20 02
Blacksmithing	.	.	.	.	.	.	.	.	.	20 11
Cement	.	.	.	.	.	.	.	.	.	52 33
Teaming	.	.	.	.	.	.	.	.	.	30 00
Sand .	.	.	.	.	.	.	.	.	.	3 75
										<u>\$2,339 73</u>

Mill and Rosemont Streets, Private Land and Brent Street.

Labor	.	.	.	.	.	.	.	.	.	\$6,126 13
Brick	.	.	.	.	.	.	.	.	.	1,311 75
Cement	.	.	.	.	.	.	.	.	.	761 25
Lumber	.	.	.	.	.	.	.	.	.	572 34
Gravel	.	.	.	.	.	.	.	.	.	455 94
Carpentry	.	.	.	.	.	.	.	.	.	314 75
Teaming	.	.	.	.	.	.	.	.	.	235 50
Sand .	.	.	.	.	.	.	.	.	.	277 49
Pipe .	.	.	.	.	.	.	.	.	.	141 42
Iron castings	.	.	.	.	.	.	.	.	.	48 80
Tools	.	.	.	.	.	.	.	.	.	24 50
Water	.	.	.	.	.	.	.	.	.	61 00
Blacksmithing	.	.	.	.	.	.	.	.	.	19 97
										<u>\$10,350 84</u>

Normandy Street.

Labor	.	.	.	.	.	.	.	.	.	\$3,332 64
Brick	.	.	.	.	.	.	.	.	.	980 15
Cement	.	.	.	.	.	.	.	.	.	607 15
Teaming	.	.	.	.	.	.	.	.	.	557 00

Carried forward, \$5,476 94

<i>Brought forward,</i>	\$5,476 94
Sand	202 07
Carpentry	191 90
Pipe	162 23
Water	160 04
Iron castings	118 23
Rubber goods	61 20
Blacksmithing	57 24
Guttermouths	32 50
Miscellaneous	31 59

James A King, Contractor.

423.8 cu. yds. rubble stone delivered for use in masonry, at \$4	747 20
	\$7,241 14

Devon-Street Outlet to Richfield Street.

Labor	\$7,385 53
Pipe	755 99
Brick	411 50
Lumber	273 82
Rubber goods	225 63
Blacksmithing	207 84
Cement	134 05
Teaming	361 00
Tools	86 61
Water	154 65
Damages	180 00
Boiler	60 00
Iron castings	59 70
Powder, etc.	56 32
Sand	31 90
Coal	9 27
	\$10,393 81

River, Fremont and Norfolk Streets.

Labor	\$310 46
Advertising	17 25
Iron castings	68 25
Drain pipe	471 69
Cement	34 50

J. P. O'Connell, Contractor.

346 ft. B. M. spruce sheathing, at \$1.00, \$0.35	
1,298.80 lin. ft. 12-in., house sewer, at 55 cents	714 34
<i>Carried forward,</i>	\$714 69
	\$902 15

<i>Brought forward,</i>	\$714 69	\$902 15
86.90 lin. ft. 15-in., house sewer, at 55 cents	47 80	
173 lin. ft. 6-in., underdrain, at 5 cents, ...	8 65	
7 manholes, at \$30	210 00	
1,068 cu. yds. rock, at \$3.50	3,740 56	
Extra work, pumping water, teaming, stock and furnishing concrete	230 58	
	\$4,952 28	
Less amount retained as per contract	236 09	
		4,716 19
		\$5,618 34

Shelton Street and Private Land.

Labor	\$168 96
Pipe	446 82
Iron castings	70 60
Cement	38 00

Daniel E. Lynch, Contractor.

13.67 cu. yds. rock excavation, at \$5.00	\$68 35	
1,468.67 lin. ft. 12-in., pipe sewer, at \$1.25	1,835 84	
9 manholes, at \$50.00	450 00	
Extra work, per order Superintendent of Streets	90 00	
	\$2,444 19	
Less amount retained	117 71	
		2,326 48
		\$3,050 86

Shamrock-Street Outlet.

Labor	\$5,657 74
Brick	1,273 00
Lumber	636 96
Cement	626 10
Carpentry	497 07
Teaming	480 00
Engine hire	308 00
Sand	160 45
Rubber goods and oil clothing	161 87
Hardware	194 91
Screenings	70 00

<i>Carried forward,</i>	\$10,066 10
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<i>Brought forward,</i>	\$10,066 10
Coal and oil	75 31
Pipe	40 71
Castings	36 70
Paving	37 00
Blacksmithing	24 91
Treenails	21 50

W. S. Rendle, Contractor.

194 piles driven, at \$2.75	533 50
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J. A. King, Contractor.

212.48 cu. yds. rubble stone masonry, at \$4	849 92
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 \$11,685 65
Tolman Street, between Neponset Avenue and Norwood Street.

Labor	\$1,233 41
Pipe	264 35
Pile driving	249 10
Water	91 40
Teaming	86 00
Brick	55 20
Lumber	29 41
Cement	27 00
Iron castings	25 60
Miscellaneous	3 98

 \$2,065 45

Less sand excavated from trench, 25 double loads, at \$1.50	37 50
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 \$2,027 95
Washington Street, between Main Sewer and Summit, near Sanford Street.

Labor	\$243 98
Pipe	397 21
Cement	61 00
Iron work	46 31
Advertising	18 50

Daniel M. Dwyer, Contractor.

1,112.60 lin. ft. 12-in., pipe sewer, at 20 cents	\$222 52
5 manholes, at \$30	150 00

Carried forward, \$372 52 \$767 00

<i>Brought forward,</i>	\$372 52	\$767 00
488.91 cu. yds. rock excavation, at \$3.90	1,906 75	
Extra work, per order Superintendent of Streets	38 47	
	\$2,317 74	
Less amount retained	115 89	
		2,201 85
		\$2,968 85

Washington Street, Miller's Lane to Grant Place.

Labor	\$277 79
Advertising	24 00
Pipe	263 17
Iron castings	11 20

P. and F. E. McCarthy, Contractors.

937.62 lin. ft. 12-in., pipe house sewer, at 50 cents	\$468 81
4 manholes on pipe sewers, at \$32	128 00
594.55 cu. yds. rock excavation, at \$3.49	2,074 98
	\$2,671 79
Less amount retained	133 59
	2,538 20
	\$3,114 36

Athelwold Street.

Labor	\$241 72
Cement	229 50
Gravel	21 70
Iron castings	109 11
Teaming	15 00
Drain pipe	645 42
Guttermouths	58 50
Printing and advertising	65 96
Flagging	8 00

J. P. O'Connell, Contractor.

55 lin. ft. earth excavation, at \$1.50	\$82 50
395.38 cu. yds. rock excavation, at \$3	1,186 14
22.13 cu. yds. American concrete, at \$4	88 52
<i>Carried forward,</i>	\$1,357 16
	\$1,394 91

<i>Brought forward,</i>	\$1,357 16	\$1,394 91
20.43 cu. yds. Portland concrete, at \$5,	102 15	
2.67 cu. yds. brick masonry, at \$5 .	13 35	
13.54 cu. yds. rubble stone masonry, at \$3.50	47 39	
131.25 lin. ft. 15-in., pipe house sewer, at 60 cents	78 75	
900.52 lin. ft. 12-in., pipe house sewer, at 50 cents	450 26	
379.50 lin. ft. 6-in., pipe house drain, at 40 cents	151 80	
151.20 lin. ft. 18-in., surface drain, at 35 cents	52 92	
210.51 lin. ft. 15-in., surface drain, at 35 cents	73 68	
280.43 lin. ft. 12-in., surface drain, at 35 cents	98 15	
116.39 lin. ft. 10-in., surface drain, at 35 cents	40 74	
7 manholes, at \$30	210 00	
4 catch-basins, at \$40	160 00	
3 drop inlets, at \$13	39 00	
18.3 cu. yds. gravel refill, at 50 cents	9 15	
18.3 cu. yds. extra earth excavation, at 80 cents	14 64	
Extra work, per order Superintendent of Streets	11 50	
		2,910 64
		\$4,305 55

Bernard Street.

Labor	\$208 09
Advertising	6 75
Drain pipe	3,613 35
Cement	261 30
Iron pipe	43 50
Iron castings	130 36
Teaming	15 00
Guttermouths	84 50

Collins & Ham, Contractors.

2 cu. yds. rock excavation, at 1 cent .	\$0 02
89.58 cu. yds. concrete, at \$4.75 .	425 50
34.66 cu. yds. brick masonry, at \$10.75	372 60
32 lin. ft. 12-in., pipe house sewer, at 60 cents	19 20

<i>Carried forward,</i>	\$817 32	\$4,362 85
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<i>Brought forward,</i>	\$817 32	\$4,362 85
323.50 lin. ft. 30-in., pipe catch-basin drain, at 60 cents	194 10	
1,001.45 lin. ft. 24-in., pipe catch-basin drain, at 40 cents	400 58	
401.30 lin. ft. 18-in., pipe catch-basin drain, at 40 cents	160 52	
30 lin. ft. 15-in., pipe catch-basin drain, at 40 cents	12 00	
84.50 lin. ft. 12-in., pipe catch-basin drain, at 35 cents	29 58	
89 lin. ft. 10-in., pipe catch-basin drain, at 30 cents	26 70	
80 lin. ft. 6-in., pipe underdrain at 10 cents	8 00	
10.03 cu. yds. rubble stone masonry at \$4	40 12	
708 lin. ft. 6-in., pipe house drain at 26 cents	184 08	
1 12-in. pipe slant placed in old 24-in. by 30-in. brick sewer, at \$1	1 00	
1 manhole on catch-basin drain, at \$30, 10 catch-basins, at \$33	30 00	
1 drop inlet, at \$12	12 00	
82 lin. ft. earth excavation, at \$3	246 00	
Extra work, per order Superintendent of Streets	10 93	
	\$2,502 93	
Less amount retained	124 60	
		2,378 33
		\$6,741 18

Burt Street, Dorchester.

Guttermouths	\$39 00
Labor	196 18
Drain pipe	740 48
Iron castings	125 00
Advertising	33 50
Teaming	7 50
Cement	94 60
Iron pipe	28 80
Flagging	8 00

J. P. O'Connell, Contractor.

1,496.85 cu. yds. rock excavation, at \$4	\$5,987 40
1.76 cu. yds. concrete, at \$4	7 04
<i>Carried forward,</i>	\$5,994 44
	\$1,273 06

<i>Brought forward,</i>	\$5,994 44	\$1,273 06
62.70 lin. ft. earth excavation for culvert, at 50 cents	31 35	
250 lin. ft. 15-in., house sewer, at 43 cents	107 50	
1,040.73 lin. ft. 12-in., house sewer, at 43 cents	447 51	
679.75 lin. ft. 12-in., pipe catch-basin drain, at 25 cents	169 94	
41.66 lin. ft. 10-in., pipe catch-basin drain, at 25 cents	10 42	
980.50 lin. ft. 6-in., house drain, at 30 cents	294 15	
2 slants in brick sewer, at \$1	2 00	
7 manholes, at \$30	210 00	
4 catch-basins, at \$40	160 00	
2 drop inlets, at \$10	20 00	
.53 cu. yds. brick masonry, at \$14	7 42	
55.30 cu. yds. rubble masonry, at \$3.50, ...	193 55	
27.66 sq. yds. rubble paving, at \$1	27 66	
10.39 cu. yds. granite covering, at \$7	72 73	
	\$7,748 67	
Less amount retained	387 43	
		7,361 24
		\$8,634 30

Columbia Road, Section No. 4.

Labor	\$188 44
Pipe	704 13
Castings	319 46
Cement	84 00
Advertising	19 50
Teaming	12 50
Guttermouths	13 00

Daniel E. Lynch, Contractor.

192 ft. B. M. spruce, other than shoring and sheeting, at \$27	\$5 18	
951.92 lin. ft. 12-in., pipe house sewer, at 53 cents	504 52	
84 lin. ft. 10-in., pipe catch-basin drain, at 43 cents	36 12	
288 lin. ft. 6-in., pipe house drain, at 45 cents	129 60	
12 slants in old sewer, at \$1	12 00	
8 manholes, at \$30	240 00	
<i>Carried forward,</i>	\$927 42	\$1,341 03

<i>Brought forward,</i>	\$927 42	\$1,341 03
6 catch-basins, at \$39	234 00	
2 drop inlets, at \$10	20 00	
35.56 cu. yds. gravel refill, at 35 cents,	12 45	
Extra work, per order Superintendent of Streets	36 71	
	\$1,230 58	
Less amount retained	179 08	
		1,051 50
		\$2,392 53

Elizabeth Street.

Labor	\$344 61
Pipe	731 84
Iron castings	77 85
Advertising	34 90
Cement	51 00
Guttermouths	32 50
Teaming	5 00

Thomas H. Connolly, Contractor.

1,140.26 cu. yds. rock excavation, at \$4	\$4,561 04
548 lin. ft. 15-in., pipe house sewer, at 50 cents	274 00
766 lin. ft. 12-in., pipe house sewer, at 55 cents	421 30
50 lin. ft. 18-in., pipe culvert, at \$1.00	50 00
351 lin. ft. 15-in., pipe catch-basin drain, at 25 cents	87 75
505 lin. ft. 12-in., pipe catch-basin drain, at 25 cents	126 25
260 lin. ft. 6-in., pipe house drain, at 35 cents	91 00
1 15 by 15 Y branch, placed	1 00
7 manholes, at \$45	315 00
4 catch-basins, at \$45	180 00
	\$6,107 34
Less amount retained	916 10
	5,191 24
	\$6,468 94

Fairmount Street.

Pipe	\$1,471 97
Iron castings	236 47
<i>Carried forward,</i>	\$1,708 44

<i>Brought forward,</i>		\$1,708 44
Guttermouths		156 00
Cement		80 60
Teaming		45 00
Stone		32 00
Advertising		31 00
Labor		207 06

P. and F. E. McCarthy, Contractors.

42.90 cu. yds. rock excavation, at \$2.50	\$107 25
3 cu. yds. concrete, at \$1.50	4 50
52 lin. ft. 24-in., pipe culvert, at 15 cents	7 80
40 lin. ft. 18-in., pipe culvert, at 15 cents	6 00
1,612 lin. ft. 12-in., pipe house sewer, at 36 cents	580 32
125 lin. ft. 18-in., pipe catch-basin drain, at 25 cents	31 25
414 lin. ft. 15-in., pipe catch-basin drain at 23 cents	95 22
1,474 lin. ft. 12-in., pipe catch-basin drain, at 20 cents	294 80
264 lin. ft. 10-in., pipe catch-basin drain, at 15 cents	39 60
5.72 cu. yds. rubble stone masonry, at \$5.00	28 60
2,132 lin. ft. 6-in., pipe house drain, at 20 cents	426 40
8 manholes, at \$28	224 00
17 catch-basins, at \$43	731 00
7 drop inlets, at \$14	98 00

\$2,674 74

Extra work, per order Superintendent of streets:

918 lin. ft. old culvert removed, at \$1	918 00
740 lin. ft. house sewer, at 28 cents	207 20
688.5 lin. ft. 6-in., pipe house drain, at 20 cents	137 70
750 lin. ft. catch-basin drain, at 20 cents	150 00
Teaming and labor	9 21

\$4,096 85

Less amount retained 401 21

3,695 64

\$5,955 74

Tonawanda Street.

Labor	\$178 71
Pipe	706 54
Cement	132 50
Iron castings	189 74
Guttermouths	51 00
Stone	14 00
Teaming	22 50
Advertising	23 00

P. and F. E. McCarthy, Contractors.

1,600 lin. ft. 12-in., pipe sewer, at 43 cents	\$688 00	
70 lin. ft. 12-in., catch-basin drain, at 28 cents	19 60	
80 lin. ft. 10-in., catch-basin drain, at 28 cents	22 40	
1,000 lin. ft. 6-in., house drain, at 30 cents	300 00	
9 manholes, at \$28	252 00	
6 catch-basins, at \$35	210 00	
3 drop inlets, at \$12	36 00	
100 cu. yds. rock excavation, at \$3.00	300 00	
	\$1,828 00	
Less amount retained	274 20	
		1,553 80
		\$2,871 79

Columbus Avenue, Old Heath Street to Ritchie Street.

Labor	\$2,786 91
Teaming	79 50
Iron castings	17 00
Pipe	401 16
Miscellaneous	2 75
	\$3,287 32

Norfolk Avenue (Dorchester Brook).

Labor	\$7,327 30
Brick	2,536 89
Teaming	2,447 50
Cement	1,111 00
Gravel	1,173 60
Sand	758 35

Carried forward,

\$15,354 64

<i>Brought forward,</i>	\$15,354 64
Lumber	660 90
Trench machine and engine hire	775 24
Carpentry	494 07
Coal	233 75
Water	136 13
Pipe	113 05
Blacksmithing	68 89
Iron work	21 20
Miscellaneous	221 39
	\$18,079 26

Harrison Avenue.

Labor	\$21,250 12
Lumber	2,234 68
Teaming	3,096 50
Brick	1,389 58
Cement	972 00
Trench machine	835 00
Screenings	784 00
Sand	487 75
Pipe	529 41
Engine hire	294 00
Carpentry	209 74
Coal	158 40
Paving	149 50
Rubber goods	154 12
Blacksmithing	123 82
Miscellaneous	128 02
Oil	58 29
Castings	55 47
Hose	31 68

William H. Sias, Contractor.

31,239.5 lin. ft. piles furnished and driven, at 11 $\frac{1}{8}$ cents	3,475 39
	\$36,417 47

Shawmut Avenue and Roxbury Street

Labor	\$1,363 09
Teaming	1,356 00
Brick	600 12
Cement	183 85
Lumber	51 86
Sand	148 25
Carpentry	147 67

<i>Carried forward,</i>	\$3,850 84
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<i>Brought forward,</i>	\$3,850 84
Blacksmithing	63 64
Iron work	8 30
Paving	93 16
Miscellaneous	20 65
Coal	13 19
Water	84 73
	\$4,134 51

West Roxbury Low Level Sewer.

Labor	\$1,330 31
Brick	1,929 37
Cement	795 00
Pipe	7 25
Castings	56 22
Advertising and printing	73 94

J. P. O'Connell, Contractor.

1,200 lin. ft. earth excavation, for brick sewer, at \$2	\$2,400 00
1,512 cu. yds. rock excavation, at \$4.50	6,804 00
329 cu. yds. brick masonry, at \$4.25	1,398 25
628 lin. ft. underdrain, at 20 cents	125 60
35 pipe connections in brick sewer, at 10 cents	3 50
7 cu. yds. gravel filling, at 10 cents	70
Extra work, per order Superintendent of Streets:	
125 cu. yds. brick masonry backing, at \$4.25	531 25
Cutting braces, teaming, etc.	104 65
	\$11,367 95
Less amount retained	536 60
	10,831 35
	\$15,023 44

Fullerton Street.

Labor	\$260 30
Pipe	528 59
Cement	168 75
Printing and advertising	83 95
Iron work	88 88
Guttermouths and flagging	34 00
<i>Carried forward,</i>	\$1,164 47

<i>Brought forward,</i>	\$1,164 47
Teaming	1 50
Coal	4 27

Thomas H. Connolly, Contractor.

464.93 lin. ft. 18-in., pipe sewer excavation and refill, at 55 cents .	\$255 71	
30.65 lin. ft. 12-in., pipe sewer excavation and refill, at 55 cents . .	16 86	
499.05 lin. ft. 12-in., pipe catch-basin drain, at 35 cents	174 67	
36.19 lin. ft. 10-in., pipe catch-basin drain, at 35 cents	12 67	
533 lin. ft. 6-in., house drain, at 38 cents	202 54	
4 manholes on pipe sewers, at \$35 .	140 00	
4 catch-basins excavation and refill, at \$40	160 00	
63 cu. yds. concrete in place, at \$3 .	189 00	
4.157 M. ft. spruce lumber placed and secured, at \$21	87 30	
3.730 M. ft. B. M. spruce sheeting and shoring left in place, at \$12 .	44 76	
5.29 cu. yds. rock excavation, at \$5 .	26 45	
467 lin. ft. 6 in., pipe underdrain, at 16 cents	74 72	
Extra labor, putting up locker, moving pipe and filling	13 80	
Extra work on account gas-pipes etc.,	160 00	
		1,558 48
		<u>\$2,728 72</u>

Parker, Turner and Norway Streets.

Labor	\$491 38
Brick	1,054 60
Cement	610 50
Pipe	1,439 18
Guttermouths	253 00
Iron work	323 15
Advertising and printing	82 89
Flagging	30 00
Teaming	2 50

J. P. O'Connell, Contractor.

566 lin. ft. earth excavation, for brick sewer, at \$1.00	\$566 00	
20.1 cu. yds. excavation below grade, at 60 cents	12 06	
<i>Carried forward,</i>	\$578 06	\$4,287 20

<i>Brought forward,</i>	\$578 06	\$4,287 20
155.25 cu. yds. brick masonry (American cement mortar), at \$4 . . .	621 00	
1 cu. yd. brick masonry (Portland cement mortar), at \$4 . . .	4 00	
170.6 cu. yds. concrete in place, at \$3.80 . . .	671 08	
17.66 M. ft. B. M. lumber left in place, at \$25 . . .	441 50	
.989 M. ft. B. M. spruce sheeting and shoring left in place, at \$13 . . .	12 86	
8,753 lin. ft. spruce piles driven and secured, at 17 cents . . .	1,488 01	
371.25 lin. ft. 12-in., pipe sewer, at 60 cents . . .	222 75	
1,146.4 lin. ft. 18-in., pipe sewer, at 55 cents . . .	630 52	
128.26 lin. ft. 10-in., pipe catch-basin drain, at 35 cents . . .	44 89	
559 lin. ft. 8-in., pipe underdrain, at 20 cents . . .	111 80	
1,422.9 lin. ft. 6-in, pipe underdrain, at 16 cents . . .	227 66	
1,670.12 lin. ft. 6-in., pipe house drain, at 35 cents . . .	584 54	
48 pipe connections laid in brick sewer, at 10 cents . . .	4 80	
6 manholes built on pipe sewers, at \$18 . . .	108 00	
15 catch-basins, at \$20 . . .	300 00	
10.55 cu. yds. rock excavation, at \$5 . . .	52 75	
Extra work, per order Superintendent of Streets, labor filling, material, etc.,	536 04	
	\$6,640 26	
Less amount retained . . .	305 21	
		6,335 05
		\$10,622 25

Peterborough Street, Roxbury.

Brick	\$1,867 50
Cement	1,127 35
Labor	920 75
Iron castings	89 35
Printing and advertising	85 86
Pipe	62 52
Traps and hooks	42 00
<i>Carried forward,</i>	\$4,195 33

<i>Brought forward,</i>	\$4,195 33
Guttermouths	39 00
Iron water pipe	29 12

Cullen Brothers, Contractors.

1,714.94 lin. ft. earth excavation, for 30 in. by 36 in., brick house, sewer, at \$2.30	\$3,944 36
35.36 lin. ft. earth excavation, for trench for 3-ft. 6-in. circular brick catch- basin drain, at \$2.30	81 33
14.64 lin. ft. earth excavation, for trench for 3-ft. circular brick catch- basin drain, at \$2.30	33 67
404.47 cu. yds. brick masonry (Amer- ican cement mortar), at \$3.80	1,536 99
450.19 cu. yds. concrete, at \$2	900 38
40.78 M. ft. B. M. spruce lumber, left in place, other than sheeting and shoring, at \$24	978 72
98.99 M. ft. B. M. spruce lumber, left in place, other than sheeting and shoring, at \$23	2,276 77
111.36 lin. ft. 18-in., pipe house sewer, at \$2	222 72
1,884.50 lin. ft. 8-in., pipe underdrain, at 16 cents	301 52
153 pipe connections laid in brick, house sewer, at 10 cents	15 30
72.88 cu. yds. rock excavation, at \$5	364 40
1,003 spruce piles driven and secured, at \$3.25	3,259 75
Extra work, per order Superintendent of Streets	725 94

\$14,641 85

Less amount retained 695 80

13,946 05

\$18,209 50

Ruggles Street.

Labor	\$458 00
Cement	676 50
Brick	766 62
Pipe	119 24
Castings	3 50

Carried forward, \$2,023 86

Brought forward,

\$2,023 86

Daniel E. Lynch, Contractor.

943.09 lin. ft. earth excavation and re- fill, for 2-ft. 6-in. by 3 ft., brick sewer, at \$1.13	\$1,065 69
19.60 cu. yds. rock excavation, at \$5	98 00
222.06 cu. yds. brick masonry (Ameri- can cement mortar), at \$4	888 24
193.97 cu. yds. concrete, at \$4 . . .	775 88
16.10 M. ft. B. M. spruce lumber, at \$28	450 80
22.2 cu. yds. earth excavation below sewer grade, at 80 cents	17 76
24.9 cu. yds. gravel refill below grade, at 50 cents	12 45
5.35 M. ft. B. M. spruce lumber left in place, at \$12	64 20
922.76 lin. ft. 8-in., pipe underdrain, at 20 cents	184 55
9,272 lin. ft. spruce piles, at 20 cents .	1,854 40
97 pipe connections, at 10 cents . .	9 70
Extra work, per order Superintendent of Streets, removing Corduroy road . .	290 15
Repairing 18-inch connections at Hunt- ington avenue	562 58
	\$6,274 40
Less amount paid last year	3,971 59

2,302 81

\$4,326 67

Plus repair of same

2,942 97

\$7,269 64

Vancouver Street.

Labor	\$575 66
Brick	379 50
Cement	213 40
Pipe	41 61
Castings	19 44
Teaming	14 75

Daniel E. Lynch, Contractor.

249.55 lin. ft. earth excavation and refill, for 2 ft. 6 in. by 3 ft. brick sewer, at 98 cents	\$244 56
3.64 cu. yds. rock excavation, at \$5 .	18 20

Carried forward,

\$262 76

\$1,244 36

<i>Brought forward,</i>	\$262 76	\$1,244 36
59.26 cu. yds. brick masonry (American cement mortar), at \$4 . . .	237 04	
51.30 cu. yds. concrete, at \$4 . . .	205 20	
4.82 M. ft. B. M. spruce lumber, at \$28	134 96	
1.56 M. ft. B. M. spruce lumber left in place, at \$12	18 72	
248.88 lin. ft. pipe underdrain, at 20 cents	49 78	
4,020 lin. ft. spruce piles, at 20 cents, ...	804 00	
27 pipe connections, at 10 cents	2 70	
		1,715 16
		\$2,959 52
Plus repairs of same		439 92
		<u>\$3,399 44</u>

Atlantic Avenue, between South Market and Commercial Wharf.

Labor	\$514 19
Pipe	221 20
Cement	43 20
Supporting track	37 42
Iron castings	32 06

Daniel M. Dwyer, Contractor.

175 cu. yds. rock excavation, at \$5 . . .	\$875 00
44 lin. ft. 15 in., pipe sewer, including manholes, etc., at \$4.50	198 00
463.15 lin. ft. 12 in., pipe sewer, including manholes, etc., at \$4.50	2,084 18
	\$3,157 18
Less amount retained	157 86
	2,999 32
	<u>\$3,847 39</u>

Central and India Streets.

Labor	\$9,461 44
Teaming	2,856 75
Brick	1,722 18
Engine and pump hire	1,280 09
Lumber	1,103 09
Cement	1,102 78
Trench machine	504 00
Screenings	461 28
Coal	417 10

<i>Carried forward,</i>		\$18,908 71
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<i>Brought forward,</i>	\$18,908 71
Sand	345 05
Paving	339 05
Carpentry	284 98
Miscellaneous	288 24
Rubber goods	189 59
Gravel	199 52
Pipe	139 58
Blacksmithing	88 81
Water pipe	108 12
Oil	69 01
Iron castings	27 59
	\$20,988 25

Commercial and Clinton Streets.

Blacksmithing	\$15 85
Labor	11,242 73
Teaming	1,057 00
Lumber	773 47
Brick	510 00
Engine and pump hire	459 66
Cement	353 75
Trench machine	160 00
Coal	184 69
Pipe	136 33
Carpentry	130 89
Miscellaneous	101 76
Tools, etc.	95 69
Oil	58 65
Sand	49 57
Screenings	46 58
Canvas	46 50
Castings	39 60
	\$15,462 72

Charles and Allen Streets.

Labor	\$473 73
Printing and advertising	78 13
Teaming	1 50

Daniel E. Lynch, Contractor.

520 lin. ft. earth excavation, for trench for brick sewer, at \$1.57	\$816 40
70 cu. yds. earth excavation below grade, at 80 cents	56 00
114 cu. yds. brick masonry (American cement mortar), at \$4.90	558 60
125 cu. yds. concrete, at \$4.25	531 25

<i>Carried forward,</i>	\$1,962 25	\$553 36
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<i>Brought forward,</i>	\$1,962 25	\$553 36
10 M. ft. B. M. spruce lumber, secured, at \$30	300 00	
40 M. ft. B. M. spruce lumber (sheeting and shoring), at \$13	520 00	
20 cu. yds. rock excavation, at \$5	100 00	
215 spruce piles driven, at \$3	645 00	
290 cu. yds. gravel refill, at \$2	580 00	

	\$4,107 25	
Less amount retained	616 09	

 3,491 16

 \$4,044 52

South Market Street.

Labor	\$2,080 25
Drain pipe	266 26
Teaming	225 50
Lumber	94 64
Brick	65 40
Water	48 95
Iron pipe	19 20
Iron work	19 00
Miscellaneous	14 75
Cement	29 70

 \$2,863 65

Cove Street.

Labor	\$16,429 15
Hire of engines and pumps	330 50
Fuel and oil	141 26
Carpentry	598 63
Water	132 28
Teaming	1,852 69
Brick	2,943 21
Iron castings	69 90
Sands, screenings and filling	720 66
Drain pipe	121 88
Cement	1,419 61
Hire of trench machine	312 00
Lumber	1,509 08
Miscellaneous	999 85

 \$27,580 70

Mt. Washington Avenue and Federal Street.

Labor	\$17,141 17
Lumber	2,929 92

Carried forward, \$20,071 09

<i>Brought forward,</i>	\$20,071 09
Teaming	1,441 50
Pipe	135 51
Cement	1,141 35
Sand, gravel and screenings	731 02
Trench machine hire	1,412 97
Engine and pump	2,946 14
Fuel	863 68
Brick	1,508 93
Carpentry	869 29
Pile driving	602 00
Miscellaneous	1,285 72

W. S. Rendle, Section One.

12,148.36 lin. ft. spruce piles, furnished and driven by daylight, at $9\frac{3}{4}$ cents	\$1,184 47
1,065.10 lin. ft. ditto driven by night, at 10 cents	106 51
	\$1,290 98
Less amount retained	193 65

1,097 33

W. S. Rendle, Section Two.

3,785 lin. ft. spruce piles, furnished and driven, at 11 cents	\$416 35
Less amount retained	62 45

353 90

\$34,460 43

Summer Street.

Labor	\$13,148 19
Lumber	1,554 45
Bricks	1,301 42
Cement	801 00
Drain pipe	104 71
Pile driving	422 79
Teaming	1,458 50
Trench machine hire	428 00
Engine and pump	955 73
Coal	295 68
Carpentry	113 86
Sand, gravel and screenings	399 48
Miscellaneous	20 04

W. H. Sias, Contractor.

8,273.84 lin. ft. spruce piles, furnished and driven by daylight, at 12 cents, ...	\$992 86
Less amount retained	148 93

843 93

\$21,847 78

APPENDIX F.

REPORT OF THE DEPUTY SUPERINTENDENT OF THE
STREET-CLEANING DIVISION.

923 TREMONT BUILDING, BOSTON, February 1, 1898.

MR. BENJAMIN W. WELLS, *Superintendent of Streets*:

DEAR SIR: I have the honor to submit herewith the annual report of the Street-Cleaning Division of the Street Department for the year ending January 31, 1898.

The following table will show that never in the history of the Street-Cleaning Division have the streets of Boston been cleaned at a more economical figure than during the past year, despite the growth of the city, and the added burdens on the division:

	Exclusive of supervision.	Including supervision.
1891 (9 months).....	\$16 94	\$18 94
1892.....	16 77	18 97
1893.....	13 99	16 77
1894.....	12 57	15 61
1895 (old districts).....	16 08	19 49
1895 (new districts).....	11 80	14 40
1896.....	12 34	14 93
1897.....	10 98	13 30

CHARACTER OF THE CITY PAVEMENT.

Macadam, in a much-travelled street, costs in the matter of cleaning, out of all proportion to its merits as a road surface.

Asphalt, which may not have other merits as a street surface, affords the street-cleaner his best opportunities. Granite block pavement occupies perhaps an intermediate place from a street-cleaner's point of view, but the modern block pavement, with the joints filled with pitch and pebble, is most satisfactory in point of cleanliness, as has been clearly demonstrated in the city proper; since its adoption in 1891 in the business district, where the most débris accumulates, and where the work is done every night, the cost per mile is the lowest in the city.

ADVANTAGES OF THE MODERN PAVEMENT.

One somewhat obvious reason for this lies in the evenness of the surface on the modern pavement, a prime factor in any attempt to clean the street. Another reason not so obvious, is — I am convinced — the lessened forcing up between the interstices of the pavement of dirt from below. This would not seem to be a serious matter, till one tried to keep the surface clean, and then a constant supply of soil would be found by the sweeper, which can come from no other source. Excessive dust in street-sweeping is a serious matter to storekeepers, and is doubtless important from a sanitary point of view, while watering the street brings about conditions that are found when the weather is wet. These observations are offered, as showing how small and special considerations will materially affect the cost of the work.

DUMPING FACILITIES.

A more serious question, from an administrative point of view, and one peculiar to Boston, is the lack of dumping facilities. We have only one dumping-wharf at our disposal, and few other means of disposing of sweepings.

It is clearly a waste of effort in a city like Boston, with a large water front, to haul street-sweepings a mile to the dumping-ground. The remedy is not, perhaps, simple, but the addition to our present facilities of one dumping-wharf at the North End would materially improve our position. This change is made all the more necessary at the present time, from the early probability of losing the Cambridge lowlands as a dumping-ground, where the sweepings from the West and North Ends are now taken.

STREET-SWEEPING METHODS.

The sweeping-machines, that have figured so long as a part of the city's street-cleaning outfit, do a certain kind of work on certain kinds of street surfaces very well, but the most efficient street-cleaning under all conditions is beyond them. The machines sweep an uneven pavement very imperfectly, and are well nigh useless in dealing with mud. A minor grievance, controlled to a great extent by the watering cart, is the cloud of dust raised by the machines. Dampening the streets does not overcome this trouble entirely, and in the summer, where upper windows of buildings or dwellings may be open, deposits of dust are serious matters to the merchant and housekeeper, even where the dust can only find ingress to buildings through the open spaces of doors and windows. The best results are practically certain with hand-sweeping, and, with the growing demand of the public for clean streets, and the modern insistence on cleanliness as a sanitary measure, hand-sweeping must come in time. My experience with hand-sweeping — and we have already a great deal of it in connection with the push-cart patrol system —

confirms me in the belief that it raises less dust and is more thorough. A great advantage in hand-sweeping, which must be necessarily done by assigning sweepers to particular sections of the street is, that a man is on the ground all day, and serves many of the purposes of a street-cleaning patrol.

The block system, as it is called, or that of assigning one man to a certain area of a street or streets, has been found to work the best. The man is directly responsible for the condition of the block, acquires a familiarity with the ground and the best means of doing the work, adapting himself to the local conditions; and generally the block system operates to bring the streets under a more minute and constant treatment. I am still of the belief, as expressed in previous reports, that a better discipline and morale of the force would be secured by uniforming the push-cart sweepers.

The clean streets found in European cities are due to the labor of many more persons than are ever seen in this country engaged in this work: Men, women and even children are hired, often at very small wages, and then the expense is much greater than the average American is ready to pay for sweeping the streets. American public opinion would not tolerate much that is a considerable factor in European street cleaning—as, for example, the employment of women and children—but is demanding a higher scale of street cleanliness each succeeding year and will unquestionably become reconciled to the expense of the best work. It is intended to make whatever changes are made in the methods of the division, in line with the above observations, so far as will be permitted by the exigencies of the work and the appropriation.

SOME UNCALLED-FOR WORK.

A matter that appears to me worthy of careful consideration is that of taking away from this division the clearing of sidewalks of snow around public grounds and public buildings. This latter work, especially, comes at a time when the resources of the division are strained to the utmost in attending to the imperative needs of traffic in the removal of snow. It is not street cleaning, nor calls necessarily for a class of labor that might be supposed to constitute the staff of a street-cleaning department.

CITY ORDINANCES.

Respecting litter on the streets, the city ordinances embody complete and adequate legislation on the subject, but their enforcement has been so lax that no good results have been attained. It would not, perhaps, be fair to say there was no improvement in the public carefulness about littering the streets. There is a slow movement for the better, evident in the statistics of the department, but public sentiment does not appear to countenance prosecutions on a severe scale as yet, and until they do, the department and the police will have doubtless to wait. Most of

the fine street-cleaning in European cities is due to the rigid enforcement of ordinances, no more exacting than the code obtaining in this city, and public opinion there, having seen the advantages of a clean street, sustains the public prosecutor in his work.

I would not feel that this report was complete without expressing my appreciation of the faithfulness of the foremen, subforemen and workmen who have ably and willingly seconded my efforts in the department.

Respectfully submitted,

JOSHUA ATWOOD, 3d,

Deputy Superintendent.

FINANCIAL STATEMENT.

Appropriation, 1897-98	\$310,000 00
Transfer to Paving Division	6 62
Expenditures for 1897-98	309,993 38
Total amount of appropriation	<u>\$310,000 00</u>

OBJECTS OF EXPENDITURES.

Superintendence.

Salary of Superintendent	\$3,000 00
Office pay-rolls	3,942 74
Stationery	300 77
Printing	904 34
Board of horses	782 76
Telephone service	395 02
	<u>\$9,325 63</u>

CLEANING STREETS.

Including Cost of Sweeping, Loading, and Removal of Street Dirt.

District 1. South Boston	\$15,537 96
Districts 2-3. East Boston and Charlestown	12,686 89
District 7. Roxbury	15,856 34
District 8. South End :	
Day gang	14,195 02
Night gang	40,507 37
District 9. Back Bay	5,514 27
District 10. West End and North End	38,210 71
Total cost of cleaning streets	<u>\$142,508 56</u>

CLEANING GUTTERS.

*Including Cost of Sweeping, Loading, and Removal of
Street Dirt.*

District	1.	South Boston	\$2,935 83
Districts	2-3.	East Boston and Charlestown .	3,753 03
District	7.	Roxbury	4,787 69
District	8.	South End :	
		Day gang	3,392 59
		Night gang	—
District	9.	Back Bay	4,564 87
District	10.	West End and North End . .	735 89
Total cost of cleaning gutters			<u>\$20,169 90</u>

Total length of gutters cleaned, 2,591.20 miles.

Average cost per mile (including dump), \$7.98.

COST OF MAINTAINING DUMPS.

District	1.	South Boston	\$469 20
Districts	2-3.	East Boston and Charlestown .	532 85
District	7.	Roxbury	—
District	8.	South End :	
		Day gang	522 90
		Night gang	611 45
District	9.	Back Bay	443 47
District	10.	West End and North End . .	1,108 28
Total cost of dumps			<u>\$3,688 15</u>

REMOVING SNOW.

Including Labor on Crossings, in Streets, Carting of Snow, etc.

District	1.	South Boston	\$2,005 88
Districts	2-3.	East Boston and Charlestown .	1,724 60
District	7.	Roxbury	2,149 91
District	8.	South End :	
		Day gang	2,330 06
		Night gang	8,059 15
District	9.	Back Bay	1,165 71
District	10.	West End and North End . .	5,903 50
Total cost			<u>\$23,338 81</u>

MISCELLANEOUS WORK.

This shows the cost of such work as may not be characterized the same in all districts.

Including Miscellaneous Work, Sweeping and Carting of Leaves, etc.

District	1.	South Boston	.	.	.	.	\$303 41
Districts	2-3.	East Boston and Charlestown	.	.	.	.	179 51
District	7.	Roxbury	.	.	.	.	372 14
District	8.	South End :					
		Day gang	.	.	.	.	537 90
		Night gang	.	.	.	.	87 85
District	9.	Back Bay	.	.	.	.	39 60
District	10.	West End and North End	.	.	.	.	516 00
Brighton	.	.	.	.	.	.	554 24
Total cost							<u>\$2,590 65</u>

CLEANING CROSSINGS.

Including Cost of Manual and Machine Labor.

Cost of cleaning crossings	.	.	.	.	.	\$993 70
Removing snow by patrol	.	.	.	.	.	2,713 87
Total cost :	.	.	.	.	.	<u>\$3,707 57</u>

PATROLLING BY DISTRICTS.

This Includes the Cost of Picking up and Removal of Refuse Papers, etc., from the Streets.

Cost of paper patrol	\$1,614 95
--------------------------------	------------

PUSH-CART PATROL SYSTEM.

Superintendence, inspection, etc.	\$2,926 20
Push-carts, including labor and teaming	34,004 81
	<u>\$36,931 01</u>

Recapitulation of Expenses, exclusive of Superintendence, Stable and Yard Expenses, Stock and Miscellaneous Accounts.

DISTRICTS.	Cost of Cleaning Streets.	Cost of Cleaning Gutters.	Cost of Dumps.	Cost of Snow.	Miscellaneous Work.	Cost of Crossings.	Patrolling in Business District.	Cost of Patrol System.	Total.
1.....	\$15,537 96	\$2,935 83	\$469 20	\$2,005 88	\$303 41	.....	.....	.....	\$21,252 28
2-3.....	12,686 89	3,753 03	532 85	1,724 60	179 51	.....	.....	.....	18,876 88
7.....	15,856 34	4,787 69	.....	2,149 91	372 14	.....	.....	.....	23,166 08
8, Day gang..	14,195 02	3,392 59	522 90	2,330 06	537 90	.....	.....	.....	20,978 47
8, Night gang.	40,507 37	.....	611 45	8,059 15	87 85	.....	.....	.....	49,265 82
9.....	5,514 27	4,564 87	443 47	1,165 71	39 60	.....	.....	.....	11,727 92
10.....	38,210 71	735 89	1,108 28	5,903 50	516 00 Brighton 554 24	.....	.....	.....	47,028 62
Cost of sweeping crossings, Patrolling in business dis- tricts.....	.....	.....	.....	.....	.....	\$3,707 57	.....	.....	3,707 57
Push-cart pa- trol system..	.....	.....	.....	.....	.....	.....	\$1,614 95	.....	1,614 95
	.....	.....	.....	.....	.....	.....	.....	\$36,931 01	36,931 01
Total.....	\$142,508 56	\$20,169 90	\$3,688 15	\$23,338 81	\$2,590 65	\$3,707 57	\$1,614 95	\$36,931 01	\$234,549 60

STABLE AND YARD EXPENSES.

*Including the Cost of the South End, West End, Roxbury,
South Boston and Charlestown Stables, as follows:*

Superintendence of stables	\$1,234 82
Labor, including the cost of feeders, hostlers, broom-makers, blacksmiths, carpenters, watch- men, yardmen, messenger, etc.	19,827 39
Hay, grain, etc., on hand and paid for	1,053 80
Cart and carriage repairs	4,253 01
Harness repairs	623 55
Horseshoeing	2,735 21
Sweeping machine repairs	2,943 99
Stable and shed repairs	1,203 00
Street-car tickets and ferry-passes	534 00
Tool repairs	125 37
Veterinary services and medicine	1,359 26
Total	<u>\$35,893 40</u>

STOCK ACCOUNT.

Broom stock purchased	\$5,543 12
Carts and carriages purchased	1,585 00
Harnesses and horse furnishings purchased	792 26
Horses purchased	2,070 00
Tools purchased	784 15
Sweeping machine	300 00
Patrol stock and maintenance of same	1,522 34
Total	<u>\$12,596 87</u>

MISCELLANEOUS.

Holidays	\$12,948 64
Scow (cost of disposal at sea of 28,813 loads of street dirt)	4,148 80
Sundries	2,610 44
Royalty on sweeping machines	450 00
Total	<u>\$20,157 88</u>

GENERAL RECAPITULATION OF EXPENSES.

Superintendence	\$9,325 63
Cleaning streets	142,508 56
Cleaning gutters	20,169 90
Maintaining dumps	3,688 15
Removal of snow and ice	23,338 81
Miscellaneous work	2,590 65

Carried forward,

\$201,621 70

STREET DEPARTMENT — STREET CLEANING DIVISION. 347

<i>Brought forward,</i>	\$201,621 70
Cleaning crossings	3,707 57
Paper patrol in business districts	1,614 95
Patrol system, push-carts	36,931 01
Stable and yard expenses	35,893 40
Stock account	12,596 87
Miscellaneous	20,157 88
Total	<u>\$312,523 38</u>

Note.—Of the above amount, the sum of \$2,530 was paid by other departments and divisions, on account of work done, etc., making the net expenses of this division, as shown in the financial statement, \$309,993.38.

INCOME.

Amount of the bills deposited with the City Collector during the financial year ending January 31, 1898, \$6,135.51.

Table showing the Cost per Mile of Cleaning the Streets in each District, exclusive of Supervision and other Expenses.

DISTRICTS.	Miles of Streets Cleaned.	Cost of Cleaning.	Pro Rata Cost of Dump.	Total Cost.	Cost per Mile.
1	1,040.01	\$15,537 96	\$394 63	\$15,932 59	\$15 31
2-3	1,014.60	12,686 89	411 19	13,098 08	12 90
7	841.23	15,856 34	.....	15,856 34	18 84
8 } Day gang.....	1,273.01	14,195 02	422 03	14,617 05	11 48
8 } Night gang.....	5,048 74	40,507 37	611 45	41,118 82	8 14
9	644.24	5,514 27	242 61	5,756 88	8 93
10	3,398.80	38,210 71	1,087 32	39,298 03	11 56
	13,260.63	\$142,508 56	\$3,169 23	\$145,677 79	

Average cost per mile of cleaning streets in seven districts, exclusive of supervision, \$10.98.

Table showing the Cost per Mile of Cleaning the Streets in each District, including Supervision, Labor, Yard and Stable Expenses.

DISTRICTS.	Miles of Streets Cleaned.	Cost of Cleaning Streets.	62% of the Total Cost of Super- vision.	74% of the Total Cost of Yard and Stable Expenses.	Total Expenses.	Total Cost per Mile.
1.....	1,040.01	\$15,932 59	\$632 36	\$2,729 31	\$19,294 26	\$18 55
2-3.....	1,014.60	13,098 08	519 85	2,243 75	15,861 68	15 63
7.....	841.23	15,856 34	629 34	2,716 24	19,201 96	22 82
8 } Day gang.....	1,273.01	14,617 05	580 14	2,503 95	17,701 14	13 90
8 } Night gang.....	5,048.74	41,118 82	1,631 98	7,043 79	49,794 59	9 86
9.....	644.24	5,756 88	228 50	986 18	6,971 56	10 82
10.....	3,398.80	39,298 03	1,559 72	6,731 89	47,589 64	14 00
	13,260.63	\$145,677 79	\$5,781 89	\$24,955 11	\$176,414 83	

Average cost per mile of cleaning the streets in seven districts, including supervision, etc., \$13.30.

Table showing the Number of Loads of Street-dirt Removed.

DISTRICTS.	No. of Loads of Dirt Re- moved.	Cost per Load of cleaning streets and removing to dumps, in- cluding Fore- man's superin- tendence.
1.....	16,920	\$1 09
2-3.....	12,194	1 34
7.....	20,467	1 00
8 { Day gang.....	10,205	1 71
{ Night gang.....	24,627	1 63
9.....	7,041	1 42
10.....	22,512	1 72
	113,966	Barrel loads.
Removed by paper patrol.....	1,060	
Removed by push-cart, patrol system	6,742	81,547
Removed by district push-carts		6,538
Totals.....	121,768	88,085

Total number of cart loads removed 121,768
 Total number of barrel loads removed 88,085

Twenty-eight thousand eight hundred and thirteen loads of the above dirt (or 24 per cent.) were delivered at the dumping scow, the towing of which to sea cost fifteen cents per load.

PUBLIC WASTE-BARRELS.

Total number of waste-barrels emptied 29,064

FORCE EMPLOYED.

Deputy Superintendent	1
Clerk	1
Messengers	4
Employees in the division, not including the above,	344
Entire force	<u>350</u>
Average force employed during the year	<u>343</u>

APPENDIX G.

REPORT OF THE DEPUTY SUPERINTENDENT OF THE STREET WATERING DIVISION.

440 AND 441 TREMONT BUILDING,
BOSTON, February 1, 1898.

MR. BENJ. W. WELLS, *Superintendent of Streets* :

DEAR SIR: I herewith respectfully submit the annual report of the expenditures, income and operations of the Street Watering Division for the financial year ending January 31, 1898.

The open character of our winters was made disagreeably manifest during the past season. In January the dust became so unbearable for a time that on January 15 and 16 an effort was made to use the watering carts, but had to be discontinued, owing to the low temperature. There does not appear to be any way of overcoming the dust nuisance during cold, open weather, and attention is called to the matter for the purpose of assuring our citizens that the division appreciates this grievance; that it has tried to give relief, but experiments have resulted in worse conditions, — danger to horse travel.

The season was noted for unusual fall weather. In 1896 the carts were employed seventeen days during September and October, while in 1897, during these months, they worked thirty-five days. The slight increase in expense over the previous year is due to the dry weather in these two months.

The amount of work done, and the character of the service rendered were about the same as in 1896. The smallness of the appropriation prevented the increase in the force of carts as urged in the last report, but during the warm weather two carts were added in West Roxbury, one cart in Roxbury, and one cart in the Back Bay in answer to the imperative needs of those sections.

In our last report attention was directed to the gradual substitution of salt water for fresh water, and the matter urges itself again because of the fact that we were obliged to pay for the water used last year and the year before. As salt-water mains are about to be constructed for fire purposes I would strongly advise that some consideration be given to the use for street-watering purposes. The cost of water for 1896 was \$35,200 and for 1897, \$41,730.40, making a total of \$76,930.40. A proportion of this expense could be saved by the use of salt water.

With your approval a letter containing the following questions was sent to the mayors of the fifty largest cities of this country

with a view of securing information of the methods pursued in other cities, and for the benefit derived from a comparison with the work accomplished by this division :

“ 1. How is the cost of street-watering borne in your city — by assessment on the estates benefited, or from the general tax levy? If by assessment, is the service compulsory upon the abutter?

“ 2. How is your work done? Do you hire the carts and do the watering under the supervision of the city, or is it done by contract?

“ 3. How much, if any, street-watering is done by the street railway companies free of cost to the city? If the street railway companies do not operate electric watering cars, do they contribute anything to the expense of watering on streets through which they run their cars? ”

In many of the cities heard from very little is attempted in the line of street-watering, and the voluntary subscription method, similar to the manner in which our paved streets have been watered, obtains in a great number of them, but it is generally unsatisfactory. Some are doing the watering by the assessment plan, and in a number the street railway companies are obliged to contribute to the expense of watering or render some actual watering service.

No city in the country does as much street-watering as the city of Boston, and there is every reason, from comparison, for satisfaction at the results the division has accomplished in this line of the public service.

In my last annual report I recommended that the division undertake the watering of paved streets, and I wish to again press the matter. This service can be rendered better by the city than under the present arrangements of the subscription method.

I wish also to request that the effort to have the Boston Elevated Railway Company contribute something to the watering of its tracks be continued.

The following sums have been expended for street-watering during the past seven (7) years :

1891	.	.	\$104,263 62	1895	.	.	\$76,424 70
1892	.	.	94,507 80	1896	.	.	71,211 81
1893	.	.	99,430 16	1897	.	.	78,736 72
1894	.	.	87,169 08				

NOTE. — During the year 1897 the sum of \$76,930.40 was expended for the water used in 1896 and 1897. This expense was not paid in previous years, and for the purpose of comparison it has been omitted from the expenditures of 1897 given above.

The income during the last year was \$482.10.

Respectfully submitted,

THOMAS J. FINNERAN,

Deputy Superintendent Street Watering Division.

Objects of Expenditures.

DISTRICTS.	Hired Carts.	Labor.	Water Posts.	Bicycles and Repairs.	Horse-hire.	Repairs of Carts.	Board of Horses.	General Supplies.	Water.	Totals.
South Boston.	\$4,012 50	\$812 00	\$121 62	.....	.....	.....	.....	.....	.....	\$4,946 12
East Boston...	4,340 00	432 25	147 68	59 48	.....	.....	.....	.....	.....	4,979 41
Charlestown...	3,802 50	423 50	86 92	.....	.....	.....	.....	.....	.....	4,312 92
Brighton.....	7,067 50	435 75	191 11	59 48	.....	.....	.....	.....	.....	7,753 84
West Roxbury.	10,159 50	826 00	291 02	118 96	.....	.....	.....	.....	.....	11,395 48
Dorchester....	9,717 50	862 75	360 51	118 96	.....	.....	.....	.....	.....	11,039 72
Roxbury	10,425 00	857 50	295 36	118 96	.....	.....	.....	.....	.....	11,696 82
City Proper ...	13,267 25	5,589 52	230 21	59 51	200 00	1,346 52	612 30	1,287 10	76,930 40	99,522 81
Totals.....	\$62,791 75	\$10,239 27	\$1,724 43	\$535 35	\$200 00	\$1,346 52	\$612 30	\$1,287 10	\$76,930 40	\$155,667 12

FINANCIAL STATEMENT.

Amount of Appropriation . . .	\$70,000 00
Transferred from Sewer Division . .	7,137 29
Transferred from Central Office . .	1,599 43
Transferred from Surplus Revenue . .	76,930 40
Total amount of appropriation . . .	\$155,667 12
Total amount of expenditures . . .	\$155,667 12

INCOME.

The following sums were charged for street-watering, and bills for the same deposited with the City Collector, during the financial year ending January 31, 1898 :

Board of Police	\$136 85
Homœopathic Hospital	105 00
Louisburg square	100 00
Fairfax and Beaumont streets	75 00
Marcella-street Home	28 00
State House Grounds	25 00
Boston Dispensary	12 25
Total	\$482 10

The division rendered service in front of 127 school-houses, and the bill for the same is \$3,466.54, and is unpaid by the School Committee.

The Fire Department, requiring special service in front of the engine-houses, notified this division that the department would do its own watering, and, therefore, no charge has been entered against it for watering.

Summary of Day Work paid for by the City.

No.	DISTRICT.	No. Carts.	No. Miles Covered.	Average per Cart.
1....	South Boston.....	9	23.05	2 56
2....	East Boston	8	21.63	2.70
3....	Charlestown.....	7	15.00	2 14
4....	Brighton	13	32.65	2.51
5....	West Roxbury	20	61.76	3.08
6....	Dorchester	19	63.31	3.31
7....	Roxbury.	20	54.19	2.70
8....	Back Bay.....	11	15.93	1.45
9....	Beacon Hill	2	4.25	2.12
10....	South End	7	14.36	2.05
	Totals.....	116	306.13	2.64

The above summary shows that 116 carts watered 306.13 miles of macadam streets this year. This is an increase of four in the number of carts, and an increase of about three-quarters of a mile in streets watered. The cost of this watering, exclusive of supervision and water, was \$62,791.75 against \$56,333.25 the year previous. The additional expense is attributable to the unusual weather conditions of the fall months referred to in the beginning of the report.

The surface watered will be materially increased during the coming season by the acquisition of Blue Hill, Huntington and Commonwealth-avenue boulevards, which are now complete for travel.

Work done by Contractors at the Expense of the Abutters.

DISTRICTS.	Contractors.	Carts.	Miles.
City Proper	Daniel Clark	4	4.45
City Proper	Potter Bros.....	5	8.75
City Proper	Proctor Bros. & Co.	5	7.25
City Proper	O. Nute & Son.....	1	2.73
East Boston.....	J. J. Fitzpatrick...	1	2.00
Charlestown	W. H. Quigley	1	2.00
Roxbury and South Boston..	A. A. Hall & Co. ..	3	7.78
Roxbury	Gilligan Bros.	1	1.25
Totals .....	.....	21	36.21

The above table shows the work done by contractors for the abutters on what is called the subscription plan. The work is exactly the same as the amount rendered the year previous. Whether the watering is done rests with the abutter, and it can be readily appreciated that many elect to go without water when it is understood that there are 93.17 miles of streets, paved in one way or another, and but 36.21 miles of them are watered. The fact that the city takes care of the macadam streets may have been the reason why many declined to provide for the watering of the paved streets on which they happened to live; but it is certain that the subscription plan is unsatisfactory for the greater reason that some abutters have paid for the service, while their neighbors, declining, have had a benefit at their expense. The experience of other cities is in the same direction.

Work done by the Contractors Free of Cost to the City.

NAME.	Carts.	Miles.
Daniel Clark	$\frac{1}{2}$	0.86
Potter Bros.	$\frac{3}{4}$	1.12
Proctor Bros.	1	1.75
O. Nute & Son.	$\frac{1}{8}$	0.21
A. A. Hall & Co.	$\frac{3}{4}$	1.09
Gilligan Bros.	$\frac{1}{4}$	0.54
Totals	$3\frac{3}{8}$	5.57

The above table shows the amount of watering done by the contractors free of cost to the city. This is in return for the subscription privileges extended to them. It represents a saving of about \$2,000 to the division.

Distribution of Carts, showing Entire Amount of Work done.

No.	DISTRICT.	Hired Carts.	Contractors' Carts.	Total.	Miles.
1....	South Boston.....	9	1	10	25.98
2....	East Boston	8	1	9	23.63
3....	Charlestown.....	7	1	8	17.00
4....	Brighton	13	.....	13	32.65
5....	West Roxbury	20	.....	20	61.76
6....	Dorchester	19	.....	19	63.31
7....	Roxbury	20	3	23	60.24
8, 9, 10	City Proper	20	15	35	57.72
	Free watering .....	.....	$3\frac{3}{8}$	$3\frac{3}{8}$	5.57
	Totals.....	116	$24\frac{3}{8}$	$140\frac{3}{8}$	347.86

Location by Districts.

DISTRICTS.	Water-Posts.		Electric Hydrants.
	1891.	1897.	
South Boston.....	23	28	
East Boston	16	34	
Charlestown	19	20	
Brighton	25	44	
West Roxbury.....	50	67	
Dorchester	61	83	
Roxbury.....	53	68	
City Proper.....	24	53	5
Totals	271	397	5

NOTE — An increase of 126 stand-pipes since 1891.

The division is indebted to Mr. J. W. Smith, the Local Fore-cast Official, for daily weather reports.

Our acknowledgments are also due to the Water Department for its assistance in the repair of stand-pipes.

APPENDIX H.

CITY OF BOSTON, ENGINEERING DEPARTMENT,
50 CITY HALL, January 30, 1898.

MR. BENJAMIN W. WELLS, *Superintendent of Streets*:

SIR: I herewith submit the following report of the work done under my direction for the Street Department during the year 1897:

The work done for the Street Department covers the same ground as in previous years, namely, the supervision of the construction of assessment streets, boulevards and street paving.

The repairs on the asphalt pavements upon which the maintenance guaranty has expired have been supervised in accordance with your directions, and a table is annexed giving repairs and cost thereof in detail; a table has also been prepared showing the details of all asphalt pavement in the city and a copy is enclosed.

On Blue Hill avenue, the work of construction has been completed to Walk Hill street; from that point to Mattapan, the construction awaits the decision of the courts as to the method of abolishing the grade crossing on the New England Railroad.

On Columbus-avenue extension, the section from West Walnut Park to Ritchie street has been built during the year. The work of constructing the new Stony brook channel has delayed the completion of the remainder of the street, but it is expected that the entire avenue will be completed in 1898.

On Commonwealth avenue, a certain amount of work was done near Chestnut Hill avenue, late in the season.

Columbia road was laid out during the year, and work promptly commenced upon it. The work done consists of a large amount of earth and rock excavation, between Blue Hill avenue and the New England Railroad.

The table showing lengths and areas of paving on accepted streets has been brought up to February 1, 1898.

Street paving has been supervised in all cases where requested. All paving laid on the before-mentioned avenues is included in the quantities given. All granite paving laid on concrete base has been laid with pitch and pebble joints.

Block stone pavement on a concrete base, laid with pitch and pebble joints, 20,287 square yards.

Block stone pavement on a gravel base, laid with pitch and pebble joints, 17,234 square yards.

Block stone pavement on a gravel base, laid with gravel joints, 67,625 square yards, not including gutter paving.

Trinidad sheet asphalt, with a binder course of asphaltic cement concrete, on an American cement concrete base, 9,715.1 square yards, at an average cost of about \$3 per square yard.

Sicilian rock asphalt on an American cement concrete base or a Portland cement concrete base, 10,032.8 square yards, at an average cost of about \$3 per square yard where on American cement concrete, and about \$3.12½ per square yard where on Portland cement concrete.

Seyssel rock asphalt, on an American cement concrete base or a Portland cement concrete base, 1,801 square yards, at a cost of \$3 per square yard.

Asphaltina, on an American Portland cement concrete base, 1,639.5 square yards, at a cost of \$2.75 per square yard.

The costs per square yard given above do not include the preparation of the roadbed.

Edgestone set, 88,649 linear feet; gutter paving laid, 33,615 square yards; brick sidewalks laid, 42,962 square yards.

Crushed stone sidewalks constructed, 35,247 square yards; flagging crosswalks laid, 7,777 square yards.

All asphalt paving is laid with a maintenance guaranty for five years.

A List of Streets Paved with Sheet Asphalt, and having a Maintenance Guaranty February 1, 1898.

TRINIDAD ASPHALT.

City Proper.

NAME.	Limits.	Base.	Length feet.	Length miles.	Area.	Guaranty expires.
Arch st.....	Franklin st. to Milk st.....	Concrete	426	.081	1,267	June 1, 1898
Barton ct.....	Brighton st. to Barton st.....	Cobble	134	.025	186	May 16, 1899
Batterymarch st.....	Milk st. toward Kilby st.....	Concrete	150	.028	466	Sept 28, 1901
Beacon st.....	68 ft. west of Gloucester st. to Mass. ave...	Concrete	1,019	.193	5,391	Sept. 27, 1898
Bond st.....	Hanson st. to Milford st.....	Concrete	192	.036	426	July 1, 1900
Boylston st.....	Easterly side Berkeley st. across Clarendon,	Concrete	656	.124	3,869	Oct. 4, 1902
Brimmer st.....	Beacon st. to Pinckney st.....	Concrete	1,087	.206	3,300	Aug. 31, 1900
Chambers st.....	Green st. across Poplar st.....	Cobble	460	.087	1,061	May 16, 1899
Chambers st.....	Brighton st. to Charles st.....	Cob. & Conc..	272	.052	604	July 1, 1900
Charter st.....	Hanover st. across Unity st.....	Cobble	318	.060	636	May 16, 1899
Columbus ave.....	Mass. ave. to 301 ft. south of Camden st....	Concrete	903	.171	5,418	Nov. 7, 1901
Cooper st.....	Endicott st. to Charlestown st.....	Concrete	205	.039	604	Sept. 27, 1902
Corning st.....	Washington st. to Shawmut ave.....	Concrete	338	.064	734	May 25, 1901
Court sq.....	Easterly side.....	Concrete	333	.063	942	June 14, 1899
Dartmouth st.....	Boylston st. to Newbury st.....	Concrete	266	.050	2,058	Sept. 8, 1899
Edinboro' st.....	Essex st. to Beach st.....	Concrete	470	.089	924	Aug. 14, 1900
Harrison ave.....	E. Newton st. to E. Springfield st.....	Concrete	928	.176	2,681	Aug. 14, 1900
Harrison ave.....	E. Springfield st. to Roxbury line.....	Concrete	..	..	130	Aug. 14, 1900
La Grange st.....	Washington st. to Harrison ave.....	Concrete	330	.063	727	June 18, 1901
Lincoln pl.....	Tremont st. toward Washington st.....	Concrete	181	.034	355	Oct. 23, 1902
North Margin st.....	Worcester st. to W. Springfield st.....	Concrete	217	.041	313	Aug. 17, 1902
Oxford st.....	Stillman st. to Thacher st.....	Concrete	515	.098	1,154	Sept. 10, 1900
Parmenter st.....	Beach st. to Essex st.....	Macadam.....	430	.081	735	Nov. 1, 1899
	Hanover st. to Salem st.....	Concrete	279	.053	764	Sept. 11, 1898

Pineknay st.....	Charles st. across Brimmer st.....	Concrete	271	.051	723	Aug. 31, 1900
Pine st.....	Washington st. to Harrison ave.....	Concrete	419	.079	597	June 18, 1901
Spring st.....	Poplar st. to Leverett st.....	Cobble.....	447	.085	908	May 20, 1900
Stevens st.....	Lincoln pl. toward Shawmut ave.....	Concrete	16	.003	22	Aug. 17, 1902
Tileston st.....	155 ft. west of Hanover st. to Salem st.....	Concrete	417	.079	470	Aug. 14, 1900
Unity st.....	Charter st. to Tileston st.....	Concrete	330	.063	500	Oct. 6, 1902
Water st.....	Liberty sq. to Broad st.....	Concrete	252	.048	682	Oct. 10, 1901
Wiget st.....	Salem st. to N. Margin st.....	Concrete	259	.049	240	Sept. 25, 1902
Totals.....	.....	..	12,520	2.371	38,887	

Charlestown.

Bunker Hill st.....	At Tufts st.....	Concrete	..	..	150	Nov. 3, 1902
Corey st.....	Moulton st., 124 ft. toward Medford st.....	Concrete	124	.024	276	Nov. 3, 1902
Moulton st.....	Easterly side Corey st. to Vine st.....	Concrete	81	.015	243	Nov. 3, 1902
Moulton st.....	Vine st. to Bunker Hill st.....	Concrete	130	.025	390	Nov. 3, 1902
Rutherford ave.....	Devens st. toward Chapman st.....	Concrete	128	.024	284	Nov. 5, 1902
Tufts st.....	Bunker Hill st., northerly.....	Concrete	141	.027	415	Nov. 3, 1902
Vine st.....	Bunker Hill st. across Moulton st.....	Concrete	165	.031	670	Nov. 3, 1902
Totals.....	.....	.....	769	.146	2,428	

Roxbury.

Cabot st.....	East side Vernon st. to Linden Park st.....	Concrete	484	.091	1,390	Aug. 30, 1902
Columbus ave.....	301 ft. south of Camden st. across Terry st.	Concrete	2,640	.500	1,584	Nov. 7, 1901
Totals.....	.....	.....	3,124	.591	17,230	

SICILIAN ROCK ASPHALT.

City Proper.

NAME.	Limits.	Base.	Length feet.	Length miles.	Area.	Guaranty expires.
Acton st.....	Washington st. to Bradford st.....	Concrete.....	259	.049	352	Nov. 3, 1901
Albany st.....	Easterly side of Stoughton st. across E. Concord st.....	Concrete.....	285	.054	1,710	Nov. 8, 1902
Ash st.....	Oak st. across Nassau st.....	Cobble.....	220	.041	391	Oct. 26, 1899
Avery st.....	Washington st. to Mason st.....	Concrete.....	360	.068	275	Oct. 18, 1902
Barton st.....	Leverett st. to Milton st.....	Concrete.....	427	.081	723	Aug. 14, 1900
Bradford st.....	Walham st. to Shawmut ave.....	Concrete.....	600	.114	1,270	Sept. 11, 1902
Charles st.....	In front of Eye and Ear Infirmary	Concrete.....	191	.036	225	Oct. 8, 1899
Cobb st.....	Washington st. to Shawmut ave.....	Concrete.....	347	.066	1,041	Sept. 16, 1902
Dwight st.....	Shawmut ave. to Tremont st.....	Concrete.....	716	.135	2,075	Aug. 8, 1898
Exeter pl.....	Chauncy st. to Harrison ave.....	Concrete.....	170	.032	387	Oct. 20, 1902
Fabin st.....	Newland st. to Ivanhoe st.....	Concrete.....	421	.080	615	Sept. 10, 1900
Fay st.....	Dover st. to Harrison ave.....	Cobble.....	318	.060	560	July 26, 1899
Hamburg st.....	Mystic st. to Harrison ave.....	Concrete.....	383	.073	597	Oct. 1, 1901
Hanover st.....	Tileston st. across Charter st.....	Concrete.....	315	.060	934	May 14, 1901
Huntington ave.....	B. & A. R.R. bridge to Cumberland st.....	Concrete.....	1,591	.301	8,840	Oct. 12, 1901
Mason st.....	213 ft. south of West st. for a distance of 231 ft., southerly.....	Concrete.....	231	.044	480	May 25, 1899
Massachusetts ave.....	Washington st. to Albany st., southerly roadway.....	Concrete.....	662	.125	4,151	Sept. 17, 1899
Mayo st.....	Castle st. to Cobb st.....	Concrete.....	251	.048	418	Sept. 11, 1902
Meander st.....	E. Dedham st. to Malden st.....	Concrete.....	307	.058	437	Sept. 3, 1901
Mystic st.....	Malden st. to E. Dedham st.....	Concrete.....	204	.039	226	Oct. 20, 1901
Mystic st.....	E. Dedham st. to E. Canton st.....	Concrete.....	215	.041	335	Oct. 20, 1901
Mystic st.....	E. Canton st. to E. Brookline st.....	Concrete.....	216	.041	337	Oct. 20, 1901
North Margin st.....	Thacher st. toward Endicott st.....	Concrete.....	205	.039	518	Nov. 19, 1902

Norwich st.....	Mystic st. to Meander st.....	Concrete.....	221	.042	339	Sept. 24, 1901
Ohio st.....	Washington st. to Shawmut ave.....	Concrete.....	343	.065	277	July 30, 1901
Pemberton sq.....	In front of Suffolk County Court House.....	Concrete.....	323	.061	1,365	May 8, 1899
Prince st.....	Hanover st. to Bennet ave.....	Concrete.....	293	.055	654	July 1, 1900
Taylor st.....	Dwight st. to Milford st.....	Concrete.....	196	.037	274	May 29, 1901
Whitmore st.....	Kneeland st. to Harvard st.....	Concrete.....	249	.047	445	Aug. 14, 1900
Totals.....	.....	.....	10,519	1.992	30,251	
<i>Charlestown.</i>						
Warren st.....	Winthrop st. to Soley st.....	Concrete.....	127	.024	365	Sept. 20, 1900
<i>South Boston.</i>						
Athens st.....	W. Second st. to A st.....	Concrete.....	617	.117	916	Oct. 9, 1900
East Broadway.....	In front of Lincoln School.....	Concrete.....	180	.034	1,000	Oct. 7, 1902
K st.....	E. Sixth st. to E. Eighth st.....	Concrete.....	566	.107	1,083	May 20, 1901
West Broadway.....	Gardner pl. 150 ft. easterly.....	Concrete.....	150	.028	648	Oct. 3, 1898
West Broadway.....	N. Y. & N. E. R.R. bridge to 170 ft. west of F st. (4-ft. gutters).....	Concrete.....	..	..	1,487	Oct. 5, 1902
West Broadway.....	150 ft. west of F st. to 267 ft. east of F st.....	Concrete.....	448	.085	1,544	Nov. 28, 1902
Totals.....	.....	.....	1,961	.371	6,678	
<i>Roxbury.</i>						
Columbus ave.....	Terry st. to within 61 ft. of station.....	Concrete.....	884	.168	5,304	Oct. 23, 1901
Huntington ave.....	Easterly side of Cumberland st. to Mass. ave., Massachusetts ave. to Gainsborough st.....	Concrete.....	747	.141	4,150	Oct. 12, 1901
Huntington ave.....	.....	Concrete.....	587	.111	3,372	Oct. 12, 1901
Totals.....	.....	.....	2,218	.420	12,826	

SEYSSEL ASPHALT.

NAME.	Limits.	Base.	Length feet.	Length miles.	Area.	Guaranty expires.
Paul st.....	Emerald st. to Village st. Village st. to Tremont st. Washington st. to Shawmut ave. Washington st. to Shawmut ave.	Concrete	133	.025	236	Oct. 23, 1902
Paul st.....		Concrete	276	.052	456	Oct. 23, 1902
Pelham st.		Concrete	320	.061	693	Oct. 12, 1902
Waterford st.....		Concrete	316	.060	544	Nov. 13, 1902
Totals.....		.....	1,045	.198	1,929	

ASPHALTINA.

Massachusetts ave.....	Columbus ave. to Tremont st. (northerly roadway).....	Concrete	267	.050	1,622	Oct. 11, 1902
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SUMMARY.

Trinidad asphalt	16,413 feet, or 3.108 miles, or 58,545 square yards.
Sicilian rock asphalt	14,825 feet, or 2.807 miles, or 50,120 square yards.
Seyssel asphalt.....	1,045 feet, or 0.198 miles, or 1,929 square yards.
Asphaltina.....	267 feet, or 0.050 miles, or 1,622 square yards.
Total sheet asphalt under maintenance guaranty February 1, 1898....	32,550 feet, or 6.163 miles, or 112,216 square yards.

Cost of Asphalt Patching, 1897.

STREET.	Year laid.	Base.	Length miles.	Total yards in street.	Yards resurfaced.	Cost of patching.	Cost per square yard of surface.
Court st., west side.....	1881	....	.064	950	17.99	\$44 97	\$.047
Doane st.....	1881	....	.059	624	12.93	32 32	.052
Kilby st.....	1881	....	.123	2,628	121.69	304 22	.115
Batterymarch st., 110 ft. from Kilby st.....	1881	....	.21	391	..	..	..
Congress st., intersection.....	1883	....	..	43	..	..	..
North Bennet st.....	1883	....	.105	920	45.38	113 46	.123
Albany st., Concord st. to Springfield st.....	1884	....	.085	2,700	44.87	112 18	.042
Endicott st.....	1884	Cobble....	.059	1,005	201.13	502 83	.500
Ash st.....	1887	Concrete..	.044	409	9.23	23 08	.056
Bennett st.....	1887	....	.034	300	40.01	100 02	.333
Central st.....	1887	....	.059	869	14.42	36 05	.041
Cooper st., North Margin st. to Endicott st.....	1887	....	.031	556	31.04	77 60	.070
Cooper st., Endicott st. to Charlestown st.....	1887	....	.038	560	..	..	..
Exchange pl.....	1887	....	.046	678	18 56	46 40	.068
Tileston st., Hanover st. to Unity st.....	1887	Cobble....	.048	350	22 56	56 41	.161
Wiggin st.....	1887	....	.020	119	4.74	11 83	.099
Poplar st., Spring st. to Charles st.....	1887	Cobble....	.109	1,192	60.55	151 37	.127
West Sixth st. toward D st.....	1887	....	.017	343	5.41	13 53	.039
Brattle sq.....	1888	....	.053	670	25.86	64 66	.097
Water st., Congress st. across Batterymarch st.....	1889	....	.062	975	68.17	170 43	.175
D st., Fifth st. to Gold st.....	1889	....	.024	448	4.68	11 70	.026
Bacon st., Charles st. across Arlington st.....	1891	Concrete..	.165	3,800	59.32	134 21	.035
Hollis st.....	1891	Block....	.052	521	6.02	15 05	.029
Court st., Court sq. to Washington st.....	1891	....	.044	642	4.33	10 82	.017
Hudson st.....	1891	Concrete..	.266	3,938	50.00	125 00	.032
Carried forward.....	.....	.....	1.628	25,631	868.89	\$2,158 14	\$2.284

Cost of Asphalt Patching, 1897. — *Continued.*

STREET.	Year laid.	Base.	Length miles.	Total yards in street.	Yards resurfaced.	Cost of patching.	Cost per square yard of surface.
<i>Brought forward</i>.....	.....	.....	1.628	25,631	868.89	\$2,158 14	\$2.284
Moon st.....	1891	Cobble	.034	384	2.30	5 75	.015
Sun Court st.....	1891	Cobble	.029	218	6.65	16 62	.075
Warrenton st.....	1891	Concrete ..	.216	2,497	31.50	78 76	.032
Austin st., Charlestown.....	1891	.....	.027	421	..	..	..
Rogers st., South Boston.....	1891	Cobble	.068	480	..	..	..
Cabot st., Tremont st. to Ruggles st.....	1891	Concrete ..	.210	3,652	25.57	63 93	.018
Columbus ave., B. & A. R.R. to Massachusetts ave.,	....	Concrete ..	.663	15,578	1,211.10	2,904 00	.186
Harrison ave.....	....	Concrete ..	.144	995	52.19	130 47	.131
Totals.....	....	.....	3.019	49,856	2,198.20	\$5,357 67	\$2.741
Average cost.....	....	.....	.....	.....	.....	.....	.107

Prices paid for surfacing patches, \$2 per yard.

Prices paid for entire removal, \$2.50 per yard.

In addition to the above, \$92.60 was paid for sundry small patches on seven asphalt streets, the guaranty upon which expired in 1897; on thirteen similar streets no patching was done.

Albany street, Stoughton street to East Concord street, was paved with $2\frac{1}{2}$ inches of Sicilian rock asphalt, on a 6-inch Portland cement concrete base, by the Boston Asphalt Company. The old pavement was removed, roadway excavated, granite edgestones reset, block paving relaid, brick sidewalks and flagging crosswalks relaid by H. Gore & Co. The former pavement was granite blocks on gravel bed. Three square granite catch-basin frames were removed and cast-iron D frames substituted.

Avery street, Washington street to Mason street, was paved with $2\frac{1}{2}$ inches of Sicilian rock asphalt, on a 6-inch Portland cement concrete base, by the Boston Asphalt Company. The old pavement was removed, roadway excavated, edgestones reset, brick sidewalks and flagging crosswalks relaid by H. Gore & Co. The former pavement was granite blocks on gravel bed. From Washington street across Haymarket place the gutters (10 inches in width) were paved with granite blocks on a concrete base.

Boylston street, east of Berkeley street to west of Clarendon street, including tracks of West End Street Railway Company, was paved with 2 inches of Trinidad lake asphalt, with $1\frac{1}{2}$ inches bituminous concrete binder, on a 6-inch American cement concrete base by the Barber Asphalt Paving Company. The old pavement was removed, roadway excavated, edgestones reset, brick sidewalks and flagging crosswalks relaid by T. M. Gill. The West End Street Railway Company, by agreement, paid for the portion within its tracks. Former pavement was macadam with granite block gutters.

Bradford street, Waltham street to Shawmut avenue, was paved with $2\frac{1}{2}$ inches Sicilian rock asphalt, on a 6-inch American cement concrete base by the Boston Asphalt Company. The roadway was sub-graded, edgestones reset, brick sidewalks and flagging crosswalks relaid by the Street Department. Former pavement was macadam, with cobble-stone gutters. Four square granite catch-basin frames were removed and cast-iron D frames substituted.

Bulfinch street, Bowdoin square to Bulfinch place, was paved with large granite blocks on a 6-inch American cement concrete base, with pitch and pebble joints. The old pavement was barred out and loaded, roadway excavated and loaded, and concrete base laid by the Metropolitan Construction Company. Roadway paving was laid, edgestones reset, brick sidewalks and flagging crosswalks relaid by H. Gore & Co. The Street Department furnished teams for carting away old blocks and surplus material. Former pavement was granite blocks on gravel bed.

Cabot street, Vernon street to Linden Park street, was paved with 2 inches of Trinidad lake asphalt, with $1\frac{1}{2}$ inches of bituminous concrete binder on a 6-inch American cement concrete base by the Barber Asphalt Paving Company. The roadway was sub-graded by the Paving Division. Edgestones were reset, brick sidewalks and flagging crosswalks relaid by Barnes & Ruffin. Former pavement was macadam with cobble-stone gutters. One

new catch-basin was built and one square granite catch-basin frame removed and a cast-iron D frame substituted.

Charles street, Cambridge street to Leverett street, including the tracks of the West End Street Railway Company, was paved with standard granite block, on a gravel bed with pitch and pebble joints, by Dennis J. Kiley. The old pavement was removed and roadway excavated by the Paving Division. Edgestones were reset, brick sidewalk and flagging crosswalks relaid by Dennis J. Kiley. The West End Street Railway Company, by agreement, paid for the portion between its tracks. Former pavement was old granite blocks on gravel bed. One new catch-basin was built and five square granite catch-basin frames were removed and cast-iron D frames substituted. Owing to sewer construction the easterly roadway between Allen and Poplar streets was not paved.

Cobb street, Shawmut avenue to Washington street, was paved with $2\frac{1}{2}$ inches of Sicilian rock asphalt on a 6-inch American cement concrete base by the Boston Asphalt Company. The roadway was excavated, edgestones reset, brick sidewalks and flagging crosswalks relaid by the Paving Division. Former pavement was macadam with block gutters. One new catch-basin was built and one square granite catch-basin frame removed and a cast-iron D frame substituted.

Congress street, State street to Exchange place, including the tracks of the West End Street Railway Company, was paved with Philadelphia special blocks on a 6-inch American cement concrete base with pitch joints. The old pavement was barred out and loaded, roadway excavated and loaded, concrete base laid by the Metropolitan Construction Company. The pavement was laid, edgestones reset, brick sidewalks and flagging crosswalks relaid by H. Gore & Co. The West End Street Railway Company, by agreement, paid for the portion within its tracks. Former pavement was old "Boston" blocks on gravel bed. One square granite catch-basin frame was removed and a cast-iron D frame substituted.

Cooper street, Endicott street to Charlestown street, was paved with 2 inches of Trinidad lake asphalt, with bituminous concrete binder, on existing concrete base, by the Barber Asphalt Paving Company. Former pavement was Trinidad lake asphalt, originally laid in 1887.

Covington street, between Thomas park and East Eighth street, is about 264 feet long and 43 feet wide, with a difference in level between the above-named limits of 62.8 feet; from East Eighth street it rises at the rate of about 17 feet per 100 for 160 feet; from this point, seven flights of artificial stone steps and platforms, with iron fences and hand rails, 104 feet long and rising 37.8 feet, were built by the W. A. Murtfeldt Company, at a cost of \$4,085. These steps were built in the centre of the street, 12 feet wide, with side flights and platforms (three in number at present), giving access to abutting property. The above price includes the cost of all necessary excavation and

grading; also surfacing, loaming and seeding the slopes between the steps and abutting property. A retaining wall was built along the estate of William S. Milligan by T. F. Broderick, at a cost of \$1,087.35. The portion of the street, 160 feet from East Eighth street, is to be constructed with a macadam roadway, granite block gutters, granite edgestones and brick sidewalks. The work of constructing this portion of the street was not begun at the end of the working season.

Dudley street, Brook avenue to Upham's Corner, including the tracks of the West End Street Railway Company, was paved with standard granite blocks on gravel bed. The roadway was sub-graded by the Paving Division. Between Brook avenue and the New England Railroad crossing the roadway was paved, edgestones reset, brick sidewalks and flagging crosswalks relaid by T. M. Gill; between the New England Railroad crossing and Upham's Corner, similar work was done by Doherty & Connors. Former pavement was macadam, with block and cobble-stone gutters. The West End Street Railway Company, by agreement, paid for the portion within its tracks.

East Broadway, in front of the Lincoln School, including the tracks of the West End Street Railway Company, was paved with $2\frac{1}{2}$ inches of Sicilian rock asphalt, on a 6-inch American cement concrete base, by the Boston Asphalt Company. The old pavement was barred out and loaded, roadway excavated and loaded, edgestones reset and brick sidewalk relaid by H. Gore & Co. The Street Department furnished teams for carting away old blocks and surplus excavation. Former pavement was granite blocks on a gravel bed. The West End Street Railway Company, by agreement, paid for the portion within its tracks.

Exeter place, Chauncy street to Harrison avenue, was paved with $2\frac{1}{2}$ inches of Sicilian rock asphalt, on a 6-inch American cement concrete base, by the Boston Asphalt Company. The roadway was sub-graded, edgestones reset, brick sidewalks and flagging crosswalks relaid by H. Gore & Co. Former pavement was macadam, with cobble-stone gutters.

La Grange street, Tremont street to Police Station No. 4, was paved with 2 inches of Trinidad lake asphalt, with $1\frac{1}{2}$ inches bituminous concrete binder, on a 6-inch American cement concrete base, by the Barber Asphalt Paving Company. The old pavement was removed, roadway excavated, edgestones reset, brick sidewalks relaid by the Paving Division. Former pavement was granite blocks on a gravel bed.

Lincoln place, Worcester street to Springfield street, was paved with 2 inches of Trinidad lake asphalt, with $1\frac{1}{2}$ inches bituminous concrete binder, on a 6-inch American cement concrete base, by the Barber Asphalt Paving Company. The roadway was sub-graded, edgestones reset, brick sidewalks and flagging crosswalks relaid by the Paving Division. Former pavement was macadam, with block gutters. Three new catch-basins were built, one on each of the following streets: Worcester, Springfield and Stevens.

Main street, Miller street across Mead street, including the tracks of the West End Street Railway Company, was paved with standard granite blocks, on a gravel bed, by John Turner & Co. The old pavement was removed, roadway excavated, edgestones reset, brick sidewalks and flagging crosswalks relaid by John Turner & Co. Former pavement was old granite blocks on gravel bed. The West End Street Railway Company, by agreement, paid for the portion within its tracks.

Massachusetts avenue (easterly side), from Tremont street to Columbus avenue, was paved with 2 inches of so-called "asphaltina" (a patented coal tar production), with $1\frac{1}{2}$ inches coal tar concrete binder, on a 6-inch American Portland (Saylor) cement concrete base, by the Boston Paving Company. The old pavement was removed and roadway excavated by the Paving Division. Former pavement was Hastings asphalt blocks on a gravel bed, laid in 1891.

Mayo street, Castle street to Cobb street, was paved with $2\frac{1}{2}$ inches of Sicilian rock asphalt, on a 6-inch American cement concrete base, by the Boston Asphalt Company. The roadway was excavated, edgestones reset, brick sidewalks and flagging crosswalks relaid by the Paving Division. Former pavement was macadam, with block stone gutters.

North street, Merchants' row to Union street, was paved with standard granite blocks, on a 6-inch American cement concrete base, with pitch and pebble joints. The old pavement was barred out and loaded, roadway excavated and loaded, concrete base laid by the Metropolitan Construction Company. The roadway was paved, edgestones reset, brick sidewalks and flagging crosswalks laid by H. Gore & Co. The Street Department furnished teams for carting away the old paving blocks and surplus excavation. Former pavement was old granite blocks on a gravel bed.

North Margin street, Thacher street towards Endicott street, was paved with $2\frac{1}{2}$ inches of Sicilian rock asphalt on a 6-inch Portland cement concrete base, by the Boston Asphalt Company. The old pavement was barred out and loaded, roadway excavated and loaded, edgestones set, brick sidewalks and flagging crosswalks laid by P. H. Bradley & Co. The Street Department furnished teams for carting away the old blocks and surplus excavation. Former pavement was old granite blocks on a gravel bed.

Paul street, Tremont street to Emerald street, was paved with $2\frac{1}{2}$ inches of Seyssel natural rock asphalt on a 6-inch American cement concrete base, by Jones & Meehan. The old pavement was barred out and loaded, roadway excavated and loaded, edgestones reset, brick sidewalk and flagging crosswalk laid by Jones & Meehan. Former pavement was macadam and paving bricks. The Street Department furnished teams for carting away old pavement and surplus excavation.

Pelham street, Washington street to Shawmut avenue, was paved with $2\frac{1}{2}$ inches of Seyssel natural rock asphalt on a 6-inch

American cement concrete base by Jones & Meehan. The roadway was excavated and loaded, edgestones reset, brick sidewalks and flagging crosswalks laid by Jones & Meehan. Former pavement was macadam with block gutters. The Street Department furnished teams for carting away surplus excavation.

Rutherford avenue, near Devens street, in front of Episcopal church, was paved with 2 inches Trinidad lake asphalt, with $1\frac{1}{2}$ inches bituminous concrete binder on a 6-inch American cement concrete base by the Barber Asphalt Paving Company. The old pavement was removed and roadway excavated by the Paving Division. Edgestones were reset, brick sidewalks and flagging crosswalks laid by P. Brennan & Co. Former pavement, granite blocks on gravel bed.

State street, Washington street to Commercial street, including tracks of the West End Street Railway Company, was paved with standard granite blocks on a 6-inch American cement concrete base with pitch and pebble joints. The old pavement was removed and roadway excavated by the Paving Division; concrete base laid by the Metropolitan Construction Company. Paving was laid, edgestones reset, brick sidewalks and flagging crosswalks laid by H. Gore & Co. Former pavement was old granite blocks on gravel bed. One new catch-basin was built and five square granite catch-basin frames were removed and cast-iron D frames substituted. Most of the old brick sidewalks were replaced by granolithic, laid by Simpson Bros. Corporation. The West End Street Railway Company, by agreement, paid for the portion within its tracks.

Tremont street, Columbus avenue to Ruggles street, including tracks of the West End Street Railway Company, was paved with large granite blocks on a gravel bed. The old pavement was removed and roadway excavated by the Paving Division. Roadway was paved, edgestones reset, brick sidewalks and flagging crosswalks relaid by Jones & Meehan. The northerly roadway, between Columbus avenue and Prentiss street, was repaired in 1896. The West End Street Railway Company, by agreement, paid for the portion within its tracks. Former pavement was old granite blocks on a gravel bed. Two new catch-basins were built.

Tufts, Vine, Moulton and Corey streets, around St. Catherine's Catholic Church, were paved with 2 inches of Trinidad lake asphalt, with $1\frac{1}{2}$ inches bituminous concrete binder, on a 6-inch American cement concrete base, by the Barber Asphalt Paving Company. The old pavement was removed and roadway excavated by the Paving Division. Edgestones were reset, brick sidewalks and flagging crosswalks relaid by P. Brennan & Co. Former pavement was macadam with block gutters. One new catch-basin was built, one square granite catch-basin frame was removed and a cast-iron D frame substituted.

Unity street, Charter street to Tileston street, was paved with 2 inches Trinidad lake asphalt, with $1\frac{1}{2}$ inches bituminous concrete binder, on a 6-inch American cement concrete base, by

the Barber Asphalt Paving Company. The old pavement was removed and roadway excavated by the Paving Division. Edgestones were reset, brick sidewalks and flagging crosswalks were relaid by Charles L. Ward. Former pavement was cobble-stones on gravel bed. Two square granite catch-basin frames were removed and cast-iron D frames substituted.

Washington street, Kneeland street to Dover street, including tracks of West End Street Railway Company, was paved with standard granite blocks on a 6-inch American cement concrete base, with pitch and pebble joints. The old pavement was removed and roadway excavated by the Paving Division. Between Kneeland street and B. and A. R.R. bridge concrete base and paving were laid, edgestones reset, brick sidewalks and flagging crosswalks laid by William Higgins. Between Boston and Albany Railroad bridge and Dover street, similar work was done by Jones & Meehan. Former pavement was granite blocks on gravel bed. Five new catch-basins were built, seven square granite catch-basin frames were removed and cast-iron D frames substituted. The West End Street Railway Company, by agreement, paid for the portion within its tracks.

Washington street, Dover street to Waltham street, including tracks of the West End Street Railway Company, was paved with standard granite blocks, partly on concrete base and partly on gravel bed, all with pitch and pebble joints. The old pavement was removed and roadway excavated by the Paving Division. Concrete base and paving were laid, edgestones reset, brick sidewalks and flagging crosswalks relaid by Jones & Meehan. Former pavement was granite blocks on gravel bed. The West End Street Railway Company, by agreement, paid for the portion within its tracks.

Waterford street, Washington street to Shawmut avenue, was paved with $2\frac{1}{2}$ inches Seyssel natural rock asphalt on a 6-inch Portland cement concrete base by Jones & Meehan. The old pavement was barred out and loaded, roadway excavated and loaded, edgestones reset, brick sidewalks and flagging crosswalks relaid by Jones & Meehan. The Street Department furnished teams for carting away old blocks and surplus excavation. Former pavement was granite blocks on gravel bed.

West Broadway, New England Railroad bridge to E street, including tracks of the West End Street Railway Company, was paved with large granite blocks on gravel bed. The old pavement was removed and roadway excavated by the Paving Division. A strip of Sicilian rock asphalt, 4 feet wide, was laid in either gutter on concrete base, for the purpose of providing a bicycle way. Roadway paving and asphalt was laid, edgestones reset, brick sidewalks and flagging crosswalks relaid by H. Gore & Co. Former pavement was granite blocks on gravel bed. The West End Street Railway Company, by agreement, paid for the portion within its tracks.

West Broadway, 113 feet west of F street to 308 feet east of F street, was paved with $2\frac{1}{2}$ inches of Sicilian rock asphalt on a

6-inch Portland cement concrete base by the Boston Asphalt Company. Granite block paving on gravel bed, with pitch joints, was laid in tracks of the West End Street Railway Company, and 18 inches outside, by H. Gore & Co. The old pavement was barred out and loaded, roadway excavated and loaded, edgestones reset, brick sidewalks and flagging crosswalks were relaid by H. Gore & Co. Former pavement was granite blocks on gravel bed. The West End Street Railway Company, by agreement, paid for the portion within its tracks.

Wiget street, Salem street to North Margin street, was paved with 2 inches Trinidad lake asphalt, with $1\frac{1}{2}$ inches bituminous concrete binder, on a 6-inch American cement concrete base, by the Barber Asphalt Paving Company. The old pavement was removed, roadway excavated, edgestones reset, brick sidewalks and flagging crosswalks relaid by the Paving Division. Former pavement was granite blocks 1 foot square. One square granite catch-basin frame was removed and a cast-iron D frame substituted.

Winthrop square, Boston proper, and the intersection of Devonshire and Franklin streets, including tracks of West End Street Railway Company, were paved with Philadelphia, special cut, granite blocks, on a 6-inch American cement concrete base. The old pavement was barred out and loaded, roadway excavated and loaded, concrete base laid by the Metropolitan Construction Company. The Street Department furnished teams for carting away old paving blocks and surplus excavation. Granite blocks and flagging crosswalks were laid by H. Gore & Co. The West End Street Railway Company, by agreement, paid for the portion within its tracks.

NEW STREETS.

The following streets were constructed under chapter 323 of the Acts of the Legislature of Massachusetts of 1891, and Acts in amendment thereof or in addition thereto:

Athelwold street, School street to Kilton street, is about 1,028 feet long. The contract for constructing the surface of this street was awarded to Collins & Ham. Work under this contract was begun July 19, 1897, and completed September 18, 1897, at a total cost of \$2,972.63. It is a 6-inch macadam road with crushed stone sidewalks. Crushed stone, gutter blocks, and straight edgestones were furnished by the city and hauled to the site of the work by the contractor. Circular edgestone and flagging for crosswalks were furnished by the contractor.

Bernard street, Harvard street to Talbot avenue, is about 1,454 feet long. The contract for constructing the surface of this street was awarded to John A. Whittemore's Sons. Work under this contract has not yet begun.

Bloomfield street, Geneva avenue to Greenbrier street, is about 1,561 feet long. The contract for constructing the surface of this street was awarded to Collins & Ham. Work under this

contract was begun September 8, 1897, and completed October 26, 1897, at a cost of \$1,756.95. It is a 6-inch macadam road, with crushed stone sidewalks. Crushed stone and gutter blocks were furnished by the city and hauled to the site of the work by the contractor. Existing edgestones were reset and flagging for crosswalks were furnished and laid by the contractor.

Boylston street. (See Street Department Report for 1896, page 467.) Boylston road to Brookline avenue is about 2,070 feet long. A contract for constructing the surface of this street was awarded to Neil McBride. Work was begun October 20, 1896, and completed June 18, 1897, at a cost of \$12,846.47. This street has a 6-inch macadam roadway, with gravel sidewalks. Crushed stone and edgestones were furnished by the city, and hauled to the site of the work by the contractor. Gutter blocks were furnished and delivered on the street by the city. Flagging for crosswalks was furnished by the contractor.

Chamberlain street, Harvard street to Algonquin street, is about 475 feet long. A contract for constructing the surface of this street was awarded to Collins & Ham. Work was begun August 2, 1897, and completed October 2, 1897, at a cost of \$1,397.29. This street has a 6-inch macadam roadway, with crushed stone sidewalks. Crushed stone, gutter blocks and edgestones were furnished by the city, and hauled to the site of the work by the contractors. Flagging for crosswalks was furnished by the contractors.

Ellet street, Adams street to Dorchester avenue, is about 444 feet long. A contract for constructing the surface of this street was awarded to H. Gore & Co. Work was begun July 31, 1897, and completed September 7, 1897, at a cost of \$1,139.21. This street has a 6-inch macadam roadway, with crushed stone sidewalks. Crushed stone, gutter blocks and edgestones were furnished by the city, and hauled to the site of the work by the contractors. Flagging for crosswalks was furnished by the contractors.

Fairmount street, Washington street to Morton street, is about 2,672 feet long. A contract for constructing the surface of this street was awarded to James McGovern. Work was begun November 16, 1897, but, with the exception of a small amount of filling and grading, nothing has been done.

Fullerton street, Brookline avenue to Fairhaven street, is about 467 feet long. A contract for constructing the surface of this street was awarded to Philip Doherty. Work was begun July 28, 1897, and completed September 25, 1897, at a cost of \$2,333.74. This street has a 6-inch macadam roadway, with crushed stone sidewalks. Crushed stone, straight edgestones and gutter blocks were furnished by the city, and hauled to the site of the work by the contractor. Circular edgestones and flagging for crosswalks were furnished by the contractor.

Gaylord street, Washington street to Chamberlain street, is about 451 feet long. A contract for constructing the surface of this street was awarded to Doherty & Connors. Work was

begun July 31, 1897, and completed September 7, 1897, at a cost of \$942.01. This street has a 6-inch macadam roadway, with crushed stone sidewalks. Crushed stone, edgestones and gutter blocks were furnished by the city, and hauled to the site of the work by the contractors. Flagging for crosswalks was furnished by the contractors.

Geneva avenue, Westville street to Dorchester avenue, is about 2,137 feet long. A contract for constructing the surface of this street was awarded to Finneran & O'Hearn. Work was begun November 13, 1896, and completed August 9, 1897, at a cost of \$6,596.18. This street has a 6-inch macadam roadway, with gravel sidewalks. Crushed stone and edgestones were furnished by the city, and hauled to the site of the work by the contractors. Gutter blocks were furnished and delivered on the street by the city. Flagging for crosswalks was furnished by the contractors.

Greenbrier street, Bloomfield street to Park street, is about 842 feet long. A contract for constructing the surface of this street was awarded to H. Gore & Co. Work was begun September 14, 1897, and completed November 19, 1897, at a cost of \$2,181.60. This street has a 6-inch macadam roadway, with crushed stone sidewalks. Crushed stone, gutter blocks and edgestones were furnished by the city, and hauled to the site of the work by the contractors. Flagging for crosswalks was furnished by the contractors.

Ipswich street, from Boylston road to Boylston street, is about 2,366 feet long. The Boston and Albany Railroad Company, as provided in its contract for filling Queensberry street, deposited filling in said Ipswich street, amounting to 35,380 cubic yards, at 51 cents per yard, equal to \$18,043.80. The contract for constructing the surface of this street has not been let.

Lauriat avenue, Blue Hill avenue to Tucker street, is about 3,160 feet long. A contract for constructing this street was awarded to Doherty & Connors. Work was begun October 5, 1896, and completed June 1, 1897, at a cost of \$9,797.62. This street has a 6-inch macadam roadway, with gravel sidewalks. Crushed stone, gutter blocks and edgestones were furnished by the city, and hauled to the site of the work by the contractors. Flagging for crosswalks was furnished by the contractors.

Norway street, Massachusetts avenue to Parker street, is about 720 feet long. A contract for constructing the surface of this street was awarded to Doherty & Connors. Work was begun August 25, 1897, and completed October 16, 1897, at a cost of \$3,327.05. This street has a 6-inch macadam roadway, with crushed stone sidewalks. Crushed stone, gutter blocks and straight edgestones were furnished by the city, and hauled to the site of the work by the contractors. Circular edgestones and flagging for crosswalks were furnished by the contractors.

Peterborough street, Audubon road to Audubon road, is about 1,833 feet long. A contract for filling this street to

sub-grade was made with Boston and Albany Railroad Company on October 30, 1896, at the rate of 51 cents per cubic yard measured in the cut. Work was begun under this contract December 2, 1896, and completed April 22, 1897. Total amount of filling deposited was 57,073 cubic yards, at 51 cents per yard, equal to \$29,107.23. The contract for constructing the surface of this street has not been let.

Queensberry street, Audubon road to Audubon road, is about 1,738 feet long. A contract for filling this street to sub-grade was made with the Boston and Albany Railroad Company, on September 7, 1897, at the rate of 51 cents per cubic yard measured in the cut. Work was begun under this contract September 23, 1897, and completed January 28, 1898. Total amount of filling 58,222 cubic yards; total cost \$29,693.22. The contract for constructing the surface of this street has not been let.

Ruggles street, Parker street to Back Bay Fens, is about 945 feet long. A contract for constructing the surface of this street was awarded to Doherty & Connors. Work was begun December 2, 1897, and suspended January 6, 1898.

Tonawanda street, Geneva avenue to Greenbrier street, is about 1,700 feet long. A contract for constructing the surface of this street was awarded to Philip Doherty. Work was begun October 11, 1897, and suspended January 6, 1898.

Turner street, Haviland street to Astor street, is about 732 feet long. A contract for constructing the surface of this street was awarded to Doherty & Connors. Work was begun August 25, 1897, and completed October 16, 1897, at a cost of \$3,714.23. This street has a 6-inch macadam roadway with brick sidewalks. Crushed stone, gutter blocks and straight edgestones were furnished by the city and hauled to the site of the work by the contractors. Bricks for sidewalks were furnished and delivered on the street by the city. Circular edgestones and flagging for crosswalks were furnished by the contractors.

Vancouver street, Huntington avenue to Ruggles street, is about 254 feet long. A contract for constructing the surface of this street was awarded to Doherty & Connors. Work was begun December 2, 1897, and suspended January 6, 1898.

Wolcott street, Columbia road to Erie street, is about 690 feet long. A contract for constructing the surface of this street was awarded to Collins & Ham. Work was begun July 30, 1897, and completed October 16, 1897, at a cost of \$1,477.11. This street has a 6-inch macadam roadway with crushed stone sidewalks. Crushed stone, gutter blocks and edgestones were furnished by the city and hauled to the site of the work by the contractors. Flagging for crosswalks was furnished by the contractors.

GRADING STREET RAILWAY TRACKS.

The grades for tracks in the following streets have been determined. On streets marked * the surveys were made and levels taken by the companies:

(*West End Street Railway.*)

Adams street, from Park street to Parkman street.

Beacon street, from Commonwealth avenue to St. Mary's street.

Boylston street, from Tremont street to Washington street.

* **Cambridge street, Brighton**, from Saunders street to near Dustin street.

Centre street, Roxbury, from Wyman street to Parker street.

Centre street, Roxbury, from Day street to Wyman street.

Charles street, from Cambridge street to Leverett street.

Chelsea street, from City square to Adams street.

Church street, from Boylston street to Providence street.

Congress street, from State street across Water street.

Dudley street, from Guild row to Eliot square.

Dudley street, from Brook avenue to Upham's corner.

East Broadway, from I street to K street.

Franklin street, at Devonshire street.

K street, from East Broadway to East Fourth street.

Main street, Charlestown, from Miller street across Mead street.

Massachusetts avenue, from Huntington avenue to Columbus avenue.

Pleasant street, between Tremont street and Shawmut avenue.

Providence street, from Columbus avenue to Church street.

Saratoga street, from Chelsea street to Winthrop Junction.

Shawmut avenue, at Pleasant street.

Staniford street, from Green street to Merrimac street.

State street, from Devonshire to Congress street.

Temple place, at Tremont street.

Tremont street, from Boylston street to Warrenton street.

Tremont street, at Pleasant street.

Tremont street, from Vernon street to Cabot street.

Tremont street, at Roxbury crossing.

Washington street, from Hollis street to Warrenton street.

Washington street, from Boston and Albany Railroad bridge to Waltham street.

* **Washington street**, from Guild street to Atherton street.

West Broadway, from New England Railroad bridge to 450 feet east of F street.

(*Lynn and Boston Railroad Company.*)

Bennington street, from Saratoga street to Walley street.

Walley street, from Bennington street to Washburn avenue.

(*West Roxbury and Roslindale Street Railway Company.*)

* **Grove street, West Roxbury**, Washington street to Dedham line.

Total length of single track grades, 15.6 miles.

Surveys and plans were made for work upon the following streets and grades and lines given. The work of construction was supervised by the Street Department:

Abbotsford street, Crawford street to Harold street, was surfaced with macadam by the Paving Division; granite block gutters, edgestones and flagging crosswalks were laid by John McCourt. Park edgestones were set, enclosing the triangular space between the lines of Abbotsford, Crawford and Harold streets, by J. McCourt. The area between park curb was loamed and grassed. Formerly not built.

Adams street, Park street to Parkman street, including tracks of West End Street Railway Company, was widened and paved with large granite blocks on gravel base, excepting the westerly roadway between Gibson and Park streets. The necessary excavating was done by the Paving Division. Paving blocks were laid, edgestones set and flagging crosswalks laid by James Dolan. Former surface was macadam.

Audubon circle, southerly side, was surfaced with Telford macadam by the Paving Division. Granite block gutters were laid and edgestones set by A. Ford & Son. Formerly not built.

Beacon street, Tremont to Somerset street, was paved with granite blocks on a gravel bed, with pitch joints. The old paving blocks were barred out, removed and cleaned, paving bed prepared and blocks relaid by H. Gore & Co. This part of the street was paved with large granite blocks on gravel bed, with pitch joints, in 1893, but was in very bad condition, owing to the construction of the Tremont Building and to the fact that the street had to be dug up several times by corporations for the purpose of laying pipes, etc.

Beacon street, Commonwealth avenue to St. Mary's street, was resurfaced with macadam by the Paving Division. West End Street Railway tracks were reset to grade. The necessary excavation was made by the Paving Division. Edgestones were reset, gutters and flagging crosswalks relaid by William Higgins. Former surface was macadam.

Beacon street, circle (northerly side), at Chestnut Hill avenue, was graded by the Paving Division. Edgestones were set, block gutters and flagging crosswalks laid by G. H. Wentworth & Co.

Belvidere street, Falmouth street towards Boston and Albany Railroad yard. A small amount of work was done, setting edgestones, paving gutters, laying flagging crosswalks and brick sidewalks, by T. M. Gill.

Boylston street (southerly side), Tremont street to Washington street, was repaved with granite blocks on gravel base, with gravel joints, by J. B. O'Rourke.

Boylston street (southerly side), Tremont street to Park square, was repaved with granite blocks on gravel base, with gravel joints, by T. M. Gill.

Centre street (Roxbury), Parker street to Day street, was resurfaced with macadam by the Paving Division. Edgestones were set, gutters and flagging crosswalks laid by James Dolan. Excavating was done by the Paving Division. Former surface was macadam.

Centre street (West Roxbury), New York, New Haven and Hartford Railroad bridge to Corey street, was resurfaced with macadam by the Paving Division. Edgestones were set, gutters paved and crosswalks laid by James Dolan. The necessary excavating was done by the Paving Division. Former surface was macadam.

Commonwealth avenue (southerly roadway), Allston street, westerly. Granite block gutters were laid by George H. Wentworth & Co.

Commonwealth avenue, between Chestnut Hill avenue and Warren street. Granite block gutters were laid by George H. Wentworth & Co.

Cove street, Kneeland street to Essex street, was widened to 100 feet, and a temporary roadway about forty feet wide was paved with granite blocks on a gravel bed. The blocks in the old street were barred out, the bed was prepared, and necessary excavation done by the Paving Division. Paving was laid, edgestones set, brick sidewalks and flagging crosswalks relaid by T. M. Gill.

Culvert street, Tremont street to Ruggles street, was paved with granite blocks on gravel bed. Paving was laid, edgestones set, brick sidewalks and flagging crosswalks laid by Barnes & Ruffin and A. Ford & Son.

Cunard street, Tremont street to Columbus avenue. Granite block gutters were laid, edgestones set and brick sidewalks laid by Barnes & Ruffin.

Gold street, B street to New England Railroad bridge. Edgestones were set, granite block gutters and brick sidewalks were laid by Wm. H. Glenn.

Haverhill street, north of Causeway street, was repaved with old granite blocks on a gravel bed by D. J. Kiley. The old pavement of cobble stones was removed and bed prepared by the Paving Division.

Lafayette avenue, Endicott street to Prince street, was paved with old granite blocks on a gravel bed by McColgan & Bradley. The old cobble-stone pavement was removed and roadway excavated by the Paving Division. Edgestones were reset, brick sidewalks and flagging crosswalks were relaid by McColgan & Bradley.

Longwood avenue, Huntington avenue to Brookline avenue, was resurfaced with macadam by the Paving Division. Edgestones were set, granite block and cobble-stone gutters and brick sidewalks laid by William Higgins.

Mason street, Tremont street to line of asphalt pavement, was repaved with old blocks on gravel base, with gravel joints, by H. Gore & Co.

Mason street, West street to engine-house, was repaved with large granite blocks on gravel base with pitch and pebble joints, by T. M. Gill.

Massachusetts avenue, Columbus avenue to Huntington avenue, was resurfaced by the Paving Division. Edgestones were set, granite block gutters, flagging crosswalks and brick sidewalks were relaid by T. M. Gill.

Providence street, Park street to beyond Church street, was repaved with old granite blocks on gravel base with gravel joints by T. M. Gill. Edgestones were reset, flagging crosswalks and brick sidewalks were relaid by T. M. Gill.

Riverside street, Columbus avenue to Tremont street. Edgestones were set, gutters paved, brick sidewalks and flagging crosswalks laid by A. Ford & Son and Barnes & Ruffin.

Ruggles street, Tremont street to New York, New Haven and Hartford Railroad location, was paved with granite blocks on gravel base with gravel joints by A. Ford & Son. Edgestones were reset, brick sidewalks and flagging crosswalks laid by A. Ford & Son.

Saratoga street, Wordsworth street to Winthrop Junction, was filled to established grade by P. J. Attridge.

Sarsfield street, Tremont street to Grinnell street. Edgestones were reset, gutters paved, brick sidewalks and flagging crosswalks laid by Barnes & Ruffin.

Staniford street, Green street to Merrimac street, was paved with granite blocks on gravel base with gravel joints by D. J. Kiley & Co. Edgestones were reset, brick sidewalks and flagging crosswalks relaid by D. J. Kiley & Co.

Station street, Columbus avenue to Parker street, was paved with granite blocks on gravel base with gravel joints; edgestones were reset, brick sidewalks and flagging crosswalks were laid by Barnes & Ruffin.

Summer street (widening), Federal street to Atlantic avenue, was paved temporarily with old granite blocks on gravel base with gravel joints; edgestones were set and flagging crosswalks laid by T. M. Gill.

Terry street, Columbus avenue to Tremont street, gutters were paved by A. Ford & Son.

Tremont street, Culvert street to Sarsfield street, was paved with large granite blocks on gravel base with gravel joints. Edgestones were reset, flagging crosswalks and brick sidewalks laid by Barnes & Ruffin.

Tufts, Vine, Moulton and Corey streets, around St. Catherine's Catholic Church. Edgestones were reset, flagging crosswalks and brick sidewalks relaid by P. Brennan & Co. Considerable paving was also done to meet the grade of asphalt pavement.

Unity street, Charter street to Tileston street. Edgestones were reset, brick sidewalks and flagging crosswalks relaid by C. L. Ward.

Walpole street, Columbus avenue to Tremont street. Edgestones were set, gutters paved, brick sidewalks and flagging crosswalks laid by A. Ford & Son.

Water street, Washington street to Devonshire street, was paved with large granite blocks on gravel base with pitch joints by H. Gore & Co.

Weston street, Tremont street to Hammet street. Gutters were paved, edgestones set, flagging crosswalks and brick sidewalks laid by A. Ford & Son and Barnes & Ruffin.

Western avenue, Market street to Everett street. Gutters were paved, edgestones set, brick sidewalks and crosswalks laid by James Grant, D. J. Kiley and G. H. Wentworth & Co.

MISCELLANEOUS WORK.

Abbottsford street, Harold street and Crawford street. Plan and specification for park curbing.

Plan case, plan and specifications.

Freeport street, plan of retaining wall.

Geneva avenue, plan and specification for cap-stones and fences on culverts.

Lauriat avenue, plan and specification for cap-stones and fences on culverts.

Table showing lengths and areas of pavements on official streets to February 1, 1898.

Tremlett street (Dorchester), plan and specification for park curbing.

Blue Hill avenue, plan and specification for retaining wall along Franklin park.

Surveys, plans and estimates for improving and paving the following streets have been made :

Albion street, Castle street to Compton street.

Carlton street, West Newton street to Berwick park.

Centre street (Roxbury), Day street to Wyman street.

Chair alley, Cross street to Richmond street.

Chelsea street, City square to Adams street.

Church street, Boylston street to Providence street.

Congress street, Exchange place across Water street.

Endicott street, Causeway street to Hanover street.

Fayette street, Ferdinand street to Church street.

Howard street, Bulfinch street to Tremont street.

I street, East Broadway to East Fourth street.

K street, East Broadway to East Fourth street.

La Grange street, Tremont street to Washington street.

Private way, Tremont street to Avery street.

Tremont street, Boylston street to Warrenton street.

Tremont street, Weston street to Northfield street.

Warren street (Roxbury), Rockland street to Woodbine street.

West Broadway, E street to Dorchester street.

West Newton street, Columbus avenue to Shawmut avenue.

DUMPING WHARF FOR THE SANITARY DIVISION OF THE STREET
DEPARTMENT.

Plans and estimates were prepared for strengthening Fort Hill Wharf; the work was done by George H. Cavanagh. An estimate was made of the cost of converting a part of Snow's Arch Wharf into a dumping plant; the work was not done.

EAST BOSTON FERRIES.

North Ferry. At the request of the Superintendent of Streets a report was made on the condition of the piers of the North Ferry.

South Ferry, East Boston side. Estimates were made for repairing the southerly drop, which was run into by a ferry-boat August 31, and badly damaged. Plans and specifications were later made for replacing the drop with a new one, and the work was let to John M. Brooks for a contract price of \$5,433.50; the new drop was put in use December 31, 1897.

Plans and specifications were made for building a tank for the new drop; the work was done under contract by John M. Brooks for \$1,737.50.

Plans were made for rebuilding the foundation and the work was done by W. H. Ellis Company. The flooring of the landings was raised to grade 13.50 by the Ferry Division of the Street Department, the extreme raise being 14 inches.

Plans were made for a rearrangement of the landing and piers, using three drops in place of two.

HARVARD-STREET BRIDGE, OVER NEW ENGLAND RAILROAD.

Plans and specifications were made for building an 8-ft. sidewalk on this bridge; the work was done by the Street Department.

HYDE PARK-AVENUE BRIDGE, OVER STONY BROOK.

Plans were prepared for building this bridge, and the work was done by the Street Department.

IPSWICH STREET.

Plans and specifications were completed in November for building the retaining wall and two bridges required for this street. One of the bridges will support the Parkway on Charlesgate West, where it crosses the street, and the other bridge carries the street over the Fens water-way.

On November 29 a contract was made with Messrs. Holbrook, Cabot & Dailey for constructing all the masonry required for the walls and bridges. The work is now in progress, and will be finished early in the coming season.

MISCELLANEOUS.

Surveys have been made and plans are being prepared for building foundations for a bridge on Columbia road, over the Old Colony Division of the New York, New Haven and Hartford Railroad.

Surveys have also been made for determining the amount of excavation from the hills on Story and Fifth streets, near H street, South Boston; the earth is being used for filling on Columbia road, at the foot of Mercer street.

Yours respectfully,

WILLIAM JACKSON,
City Engineer.

APPENDIX I.

REPORT OF THE CHIEF SMOKE INSPECTOR.

28 COURT SQUARE, BOSTON, February 1, 1898.

BENJ. W. WELLS, Esq., *Superintendent of Streets*:

DEAR SIR: I herewith submit a report of the work performed under chapter 389, Acts of 1895, and section 119, chapter 175, Acts of 1897, relating to the Smoke Nuisance in this city.

Under the law of 1895, a chimney could emit "dark or thick gray" smoke for five minutes continuously, or twenty-five per cent. of a continuous period of twelve hours before it was declared a nuisance. There were times at rare intervals when a chimney would emit dark or thick gray smoke for five minutes continuously, but they were so rare that it was thought that the evidence with regard to them would not stand the strain of a trial; and unless the parties complained or felt disposed to make changes at some expense there was no remedy other than taking the case into court, and very little if anything could be done.

Section 119, chapter 175 of the Acts of 1897, provides that "the Building Commissioner may from time to time, after public notice and hearing, prescribe conditions on which any or all boilers may be maintained in buildings, and if any person interested objects to such conditions they shall be referred to a board of appeal, consisting of the Chairman of the Board of Health, Fire Commissioner and the Board of Appeal."

This gives the Building Commissioner the power to make any conditions that are at all fair with regard to the conduct of furnaces burning soft coal, as in some cases the emission of smoke for a much shorter period than the law allows is somewhat of a nuisance, owing to location, conditions, etc.

In order to take action under this law it is necessary to have a complaint from parties affected; when a complaint is received against an offending stack an observation is taken, and if the chimney is emitting smoke to the annoyance of the parties who complained, but not enough to violate the law, the attention of the owner or parties interested in the plant is called to the complaint and also to the law, and all complaints so far, some of

which required time owing to experiments, the department allowing considerable latitude in that direction, have been settled satisfactorily to all parties concerned without bringing the complaint before the Building Commissioner.

Several complaints were also received against house chimneys; these chimneys, while not under the jurisdiction of this office, were looked into, and in some cases the suggestions offered were carried out, affording considerable relief.

Section 99, chapter 3, Revised Ordinances, 1892, provides that "no person shall use bituminous coal for the purpose of generating steam in boilers in any building, unless the furnace in which said coal is burned is provided with some effectual device for consuming its own smoke."

It was found necessary, if any progress were to be made on the smoke question, to enforce the above ordinance on all new boilers, which has been done for the past three years. Early in August, 1897, the Music Hall Association made application to the Building Commissioner to place and maintain a boiler in Music Hall, and notice was sent them to the effect that the department would object to the granting of the permit unless they complied with the above ordinance. At the expiration of ten days, not having received any reply, a notice of objection was filed with the Building Commissioner, who forwarded the same to the Board of Appeal, who later gave a hearing, the Music Hall Association and the City of Boston being represented by counsel. The decision of the Board of Appeal was to the effect that no permit should be issued until the above parties had complied with the ordinance. This they have since done.

As nothing appeared in the application for boiler permits touching the matter of the use of bituminous coal, the Corporation Counsel, in the latter part of September, drew up a new form of application and permit, calling attention in the application to the fact that if bituminous coal was to be used, the furnace should be provided with a smoke-consuming device. The permit required the device when adopted to be satisfactory to this office; the necessity of this was shown in the fact, that since the enforcement of the ordinance relative to the adoption of smoke consumers, some persons, with a view of evading the law, equipped their boilers with cheap and ineffective devices, which, upon investigation, were found to be short lived and worthless.

There have been times during the past year when the emission of smoke from chimneys has been very noticeable, particularly the past few months. Plants that had previously never given any trouble were reported by the observers, and, upon investigation, were found to be using what is known as a low grade of bituminous coal, containing a large percentage of volatile matter, this coal being considered good for steaming qualities, but making very much smoke. To continue the use of this kind of fuel left the owners of plants liable to become amenable to the law, and when this fact was called to their attention, orders

were immediately given by them to stop the further use of this grade of coal.

The greater portion of this coal was later traced as coming from the coal pockets of the Boston & Maine Railroad at Charlestown, which were burned some time ago. This coal was sold by the underwriters to a syndicate, who in turn sold it to consumers as a high grade coal, at much less than the market price.

During the past two months a visit was made to some eighty-nine boiler plants, the owners of which having at the time the permit was obtained, agreed to burn anthracite coal. These plants are in the main used only during cold weather, and this investigation was made with a view of determining whether the above conditions were being carried out. Fourteen plants were found burning bituminous coal, three of which were equipped with smoke devices; the remainder were notified they were violating the conditions of their permit, all of whom have since complied with the requirements of the department.

COAL IMPORTATIONS.

The following table shows the number of tons and value of importations of Nova Scotia coal recorded at the port of Boston for the year ending January 31, 1898, the main portion of which is used outside the city limits :

MONTH.	Tons.	Value.
February	5,765	\$9,859
March	4,063	7,015
April	6,174	9,986
May	6,200	10,765
June	3,525	6,059
July	8,123	14,385
August	1,954	3,517
September	2,357	2,357
October	1,552	1,552
November	612	773
December	160	176
January, 1898	1,245	1,245
Total	41,730	\$67,689

BOILER APPLICATIONS.

During the past year 409 applications were received from the Building Department and disposed of as follows :

Tubular boilers, hot-water heaters, etc.	289
Signed to use hard coal	66
Adopted smoke devices	30
Screenings and soft coal mixed	12
Screenings and shavings mixed	1
Duplicates	6
Applications withdrawn	2
Engines	2
Dynamo	1
Total.	409

SPECIAL REPORTS.

The following special reports have been made from time to time :

February 4. Report, with observations, on the plant of the Massachusetts Institute of Technology, Boylston street.

February 12. Report, with observation, on plant of the Homœopathic Hospital, Albany street.

February 18. Report, with observations, on plant of Houghton & Dutton, Tremont street.

February 24. Report, with observations, on plant of the Thomas G. Plant Company, Bickford street, Ward 22.

March 6. Report on complaint against Vose & Sons, Washington, corner Waltham streets.

March 9. Report, with observations, on plant of Houghton & Dutton, Tremont street.

March 27. Report, with observations, on plant of the Blodgett estate, 256 Purchase street.

April 8. Report, with observations, on plant of the Massachusetts Fireproof Storage Warehouse Company, Huntington avenue, Parker and Bryant streets.

April 20. Report on complaint against Park Building, Park square, corner Boylston street.

April 23. Report on complaint against Charles M. Priest (restaurant), 102 Dartmouth street.

April 28. Report, with observation, on plant of Houghton & Dutton, Tremont street.

May 14. Report on complaint against plant of Church Green Electric Lighting Company, Sullivan place.

June 9. Report, with observation, on plant of Bowdoin square Hotel, Bowdoin square.

June 23. Report on complaint against plant of Church Green Electric Lighting Company, Sullivan place.

June 28. Report on complaint against plant of Minot estate, 9-13 Randolph street.

July 22. Report on complaint against Merello's bakery, 1260 Washington street.

August 17. Report on refusal of Trustees of Music Hall Association to comply with chapter 3, section 99, Revised Ordinances, 1892.

August 26. Report, with observations, on plant of Boston Hotel and Steamboat Laundry Company, 59 West Newton street.

October 2. Report on complaint against plant of George W. Young & Co. (saw-mill), Albany, corner Dedham street.

October 20. Report on communication from His Honor the Mayor, relative to the smoke nuisance from the plant of George W. Young & Co. (saw-mill), Albany, corner Dedham street.

November 11. Report on complaint against plant of Block Plant Electric Light Company, Province court.

November 27. Report, with observations, on plant of R. H. White & Co., Washington street.

December 13. Report, with observations, on plant of F. L. Ames estate, 77 Chauncey street.

December 22. Report on complaint against plant of Carter Building, Washington, corner Water street.

SUMMARY.

The following is a brief summary of the work for the year ending January 31, 1898:

Number of boiler permits received	.	.	.	.	409
Number agreeing to burn hard coal	.	.	.	.	355
Number of short observations taken	.	.	.	.	333
Number of observations lasting from three to nine hours,					40
Number of special reports	.	.	.	.	24

WEATHER REPORT.

Commencing January 1, 1897, there has been obtained from the Weather Bureau a weekly weather record of the temperature, humidity, character of the day, direction and miles per hour of the wind, and also the general precipitation, showing the nature of the same, when it began and ended, and the amount in inches, as shown by the following table:

Weather report for the week ending.....

	Temperature.			Relative Humidity.		Character of the Day.	Wind.	
	Max.	Min.	Mean	8 A.M.	8 P.M.		Direction.	Miles per Hour.
Sunday								
Monday								
Tuesday.....								
Wednesday..								
Thursday....								
Friday								
Saturday								

PRECIPITATION.

	Character.	8 A.M.		Character.	8 P.M.		Snowfall in.	Rainfall. in.
		Beginning.	End.		Beginning.	End.		
Sunday								
Monday.....								
Tuesday.....								
Wednesday..								
Thursday								
Friday.....								
Saturday.....								

Respectfully submitted,

THOMAS F. KELLEY,

Chief Inspector.

APPENDIX J.

FORMER SUPERINTENDENTS AND DOCUMENT
NUMBERS OF ANNUAL REPORTS.

Bridge Department before 1891.

Previous to 1886, under charge of City Engineer.

NAME.	Year.
Bartholomew M. Young	1886 to 1889
James H. Nugent	1889 to 1891

Bridge Department before 1891.

NAME OF DOCUMENT.	For Year.	Pub. Year.	No. of Doc.
Annual report	1886	1887	29
" "	1887	1888	26
" "	1888	1889	29
" "	1889	1890	22
" "	1890	1891	*

* Published in annual report, Executive Department, Part I., City Document No. 1, 1891.

Paving Department before 1891.

NAME.	Year.
Enoch Patterson, Superintendent Streets and Drains .	1827 to 1831
Zephaniah Sampson, " " " "	1831 to 1846
Thomas Hunting, Superintendent	1846 to 1853
Alfred T. Turner, "	1853 to 1864
Charles Harris, "	1864 to 1883
Nehemiah T. Merritt, "	1883
James J. Flynn, "	1883
Charles Harris, "	1884
Michael Meehan, "	1884 to 1886
John W. McDonald, "	1886 to 1889
J. Edwin Jones, "	1889 to 1891

Paving Department before 1891.

NAME OF DOCUMENT.	For Year.	Pub. Year.	No. of Doc.
Quarterly report		1851	6
“ “		1851	29
Annual report	1851	1852	2
“ “	1852	1853	6
“ “	1853	1854	6
“ “	1854	1855	5
“ “	1855	1856	3
“ “	1856	1857	3
“ “	1857	1858	3
“ “	1858	1859	5
“ “	1859	1860	6
“ “	1860	1861	5
“ “	1861	1862	4
“ “	1862	1863	3
“ “	1863	1864	3
“ “	1864	1865	7
“ “	1865	1866	3
“ “	1866	1867	6
“ “	1867	1868	9
“ “	1868	1869	14
“ “	1869	1870	13
“ “	1870	1871	12
“ “	1871	1872	16
“ “	1872	1873	21
“ “	1873	1874	25
“ “	1874	1875	27
“ “	1875	1876	30
“ “	1876	1877	38
“ “	1877	1878	29
“ “	1878	1879	24
“ “	1879	1880	24
“ “	1880	1881	48
“ “	1881	1882	51
“ “	1882	1883	47
“ “	1883	1884	46
“ “	1884	1885	97
“ “	1885	1886	30
“ “	1886	1887	16
“ “	1887	1888	23
“ “	1888	1889	30
“ “	1889	1890	19
“ “	1890	1891	*

* Published in annual report, Executive Department, Part II., City Document No. 1, 1891.

Sewer Department before 1891.

NAME.	Year.
Enoch Patterson, Superintendent	1827 to 1831
Zephaniah Sampson, "	1831 to 1837
Charles B. Wells, "	1837 to 1856
Simeon B. Smith, "	1856 to 1863
William H. Bradley, "	1863 to 1883
Horace A. Moses, "	1883 to 1885
Thomas J. Young, "	1885 to 1887
Seth Perkins, "	1887 to 1889
Charles Morton, "	1889 to 1891

Sewer Department before 1891.

NAME OF DOCUMENT.	For Year.	Pub. Year.	No. Doc.
Annual report	1859	1861	11
" "	1860	1861	12
" "	1861	1862	12
" "	1862	1863	13
" "	1863	1864	11
" "	1864	1865	5
" "	1865	1866	6
" "	1866	1867	8
" "	1867	1868	13
" "	1868	1869	11
" "	1869	1870	3
" "	1870	1871	11
" "	1871	1872	10
" "	1872	1873	13
" "	1873	1874	12
" "	1874	1875	17
" "	1875	1876	11
" "	1876	1877	13
" "	1877	1878	15
" "	1878	1879	11
" "	1879	1880	16
" "	1880	1881	19
" "	1881	1882	18
" "	1882	1883	16
" "	1883	1884	43
" "	1884	1885	
" "	1885	1886	58
" "	1886	1887	69
" "	1887	1888	81
" "	1888	1889	129
" "	1889	1890	14
" "	1890	1891	*

* Published in annual report, Executive Department, Part II., City Document No. 1, 1891.

Health Department before 1891.

Sanitary.

NAME.						Year.
Ezra Forristall, Superintendent	.	.	.	.	.	1853 to 1854
Joseph W. Coburn, "	.	.	.	.	.	1854 to 1855
Ezra Forristall, "	.	.	.	.	.	1855 to 1869
George W. Forristall, "	.	.	.	.	.	1869 to 1890

Health Department before 1891.

Sanitary.

NAME OF DOCUMENT.						Year.	Pub. Year.	No. of Doc.
Annual report	.	.	.	.	.	1853	1854	7
" "	.	.	.	.	.	1854	1855	6
" "	.	.	.	.	.	1855	1856	4
" "	.	.	.	.	.	1856	1857	4
" "	.	.	.	.	.	1857	1858	4
" "	.	.	.	.	.	1858	1859	4
" "	.	.	.	.	.	1859	1860	5
" "	.	.	.	.	.	1860	1861	6
" "	.	.	.	.	.	1861	1862	5
" "	.	.	.	.	.	1862	1863	5
" "	.	.	.	.	.	1863	1864	4
" "	.	.	.	.	.	1864	1865	4
" "	.	.	.	.	.	1865	1866	8
" "	.	.	.	.	.	1866	1867	7
" "	.	.	.	.	.	1867	1868	8
" "	.	.	.	.	.	1868	1869	12
" "	.	.	.	.	.	1869	1870	4
" "	.	.	.	.	.	1870	1871	10
" "	.	.	.	.	.	1871	1872	17
" "	.	.	.	.	.	1872	1873	40
Annual report from 1873 to 1884, inclusive; the Superintendent's report was embodied in the report of the Board of Health . . .						1885	1886	45
Annual report	.	.	.	.	.	1886	1887	22
" "	.	.	.	.	.	1887	1888	16
" "	.	.	.	.	.	1888	1889	23
" "	.	.	.	.	.	1889	1890	21
" "	.	.	.	.	.	1890	1891	*

* Published in annual report, Executive Department, Part II., City Document No. 1, 1891.

Commissioners of Cambridge Bridges before 1891.

(West Boston, Canal and Prison Point.)

NAME.	Year.
Frederick W. Lincoln, Commissioner for Boston,	{ May 22, 1871, to March, 1891.
Ezra Parmenter, Commissioner for Cambridge .	{ June 14, 1871, to Jan. 31, 1883.
William J. Marvin, Commissioner for Cambridge,	{ March 28, 1883, to present time.

NOTE. — Harvard bridge added in 1892.

Commissioners of Cambridge Bridges before 1891.

(West Boston, Canal and Prison Point.)

NAME OF DOCUMENT.	For Year.	Pub. Year.	No. of Doc.
Annual report	1871	1872	19
" "	1872	1873	12
" "	1873	1874	16
" "	1874	1875	23
" "	1875	1876	20
" "	1876	1877	12
" "	1877	1878	10
" "	1878	1879	8
" "	1879	1880	12
" "	1880	1881	8
" "	1881	1882	15
" "	1882	1883	15
" "	1883	1884	19
" "	1884	1885	8
" "	1885	1886	12
" "	1886	1887	19
" "	1887	1888	25
" "	1888	1889	22
" "	1889	1890	20
" "	1890	1891	*

* Published in annual report, Executive Department, Part I., City Document No. 1, 1891.

Ferry Department before 1895.

NAME.	Year.
Board of Ferry Directors	1870 1891
William J. Burke, Superintendent	1891 May 1, 1895.
Thomas Kellough, "	May 1, 1895. July 1, 1895.

Ferry Department before 1895.

NAME OF DOCUMENT.	For Year.	Pub. Year.	No. of Doc.
Annual report	1870	1871	41
" "	1871	1872	55
" "	1872	1873	81
" "	1873	1874	42
" "	1874	1875	65
" "	1875	1876	51
" "	1876	1877	53
" "	1877	1878	49
" "	1878	1879	60
" "	1879	1880	74
" "	1880	1881	77
" "	1881	1882	72
" "	1882	1883	93
" "	1883	1884	76
" "	1884	1885	72
" "	1885	1886	28
" "	1886	1887	12
" "	1887	1888	10
" "	1888	1889	3
" "	1889	1890	4
" "	1890	1891	*
" "	1891	1892	12
" "	1892	1893	11
" "	1893	1894	11
" "	1894	1895	11

*Published in annual report, Executive Department, Part I., City Document No. 1, 1891.

Street Department since 1891.

Superintendent.

Henry H. Carter, Member of American Society Civil Engineers.

Resigned December 8, 1894.

Charles R. Cutter, *Acting Superintendent from December 8, 1894, to January 14, 1895.*

Member of the Boston Society Civil Engineers.

Bertrand T. Wheeler, *Superintendent from January 14, 1895, to February 4, 1896.*

Member of the Boston Society Civil Engineers.

Benjamin W. Wells, *Superintendent from February 4, 1896, to the present time.*

BRIDGE DIVISION.—John A. McLaughlin, *Deputy Superintendent until June 1, 1895.*

BRIDGE DIVISION.—John P. Wise, *Deputy Superintendent from June 1, 1895, to February 14, 1896.*

BRIDGE DIVISION.—William H. Carberry, *Deputy Superintendent from February 14, 1896, to the present time.*

FERRY DIVISION.—Thomas Kellough, *Deputy Superintendent from July 1, 1895, to February 14, 1896.*

FERRY DIVISION.—William F. McClellan, *Deputy Superintendent from February 14, 1896, to the present time.*

PAVING DIVISION.—Charles R. Cutter, *Deputy Superintendent until January 24, 1895.*

PAVING DIVISION.—Darius N. Payson, *Deputy Superintendent from January 24, 1895, to March 1, 1896.*

PAVING DIVISION.—John L. Kelly, *Deputy Superintendent from March 1, 1896, to the present time.*

SANITARY DIVISION.—George W. Forristall,¹ *Deputy Superintendent.*

SANITARY DIVISION.—Philip A. Jackson, *Acting Deputy Superintendent from January 16, 1894, to February 1, 1895.*

SANITARY DIVISION.—Charles A. Young, *Deputy Superintendent from February, 1895, to March 1, 1896.*

SANITARY DIVISION.—Patrick O'Shea, *Deputy Superintendent from March 1, 1896, to the present time.*

SEWER DIVISION.—Henry W. Sanborn, *Deputy Superintendent until July 10, 1896.*
Member Philadelphia Society Civil Engineers.

SEWER DIVISION.—Charles R. Cutter, *Deputy Superintendent from July 10, 1896, to the present time.*

Member of the Boston Society of Civil Engineers.

STREET CLEANING DIVISION.—Philip A. Jackson, *Deputy Superintendent until March 22, 1895.*

STREET CLEANING DIVISION.—Benjamin M. Cram, *Deputy Superintendent from March 22, 1895, to March 1, 1896.*

STREET CLEANING DIVISION.—Joshua Atwood, 3d, *Deputy Superintendent from March 1, 1896, to the present time.*

Member of the Boston Society of Civil Engineers.

STREET WATERING DIVISION.—M. Edwin Libby, *Deputy Superintendent from March 6, 1895, to March 1, 1896.*

STREET WATERING DIVISION.—Thomas J. Finneran, *Deputy Superintendent from March 1, 1896, to the present time.*

BOSTON AND CAMBRIDGE BRIDGES.—Henry H. Carter, *ex officio, Commissioner for Boston, until December 8, 1894.*

Charles R. Cutter, *Acting, from December 8, 1894, to January 14, 1895.*

Bertrand T. Wheeler, *from January 14, 1895, to February 4, 1896.*

Benjamin W. Wells, *from February 14, 1896, to the present time.*

William J. Marvin, *Commissioner for Cambridge.*

¹ Died January 12, 1894.

Street Department.

NAME OF DOCUMENT.	For Year.	Pub. Year.	No. of Doc.
Annual report, Executive Dept. Part II....	1891	1892	36
“ “ “ “ “ ...	1892	1893	34
“ “ “ “ “ ...	1893	1894	34
“ “ “ “ “ ...	1894	1895	34
“ “ “ “ “ ...	1895	1896	29
“ “ “ “ “ ...	1896	1897	29
“ “ “ “ “ ...	1897	1898	34



ANNUAL REPORT
OF THE
STREET LAYING-OUT DEPARTMENT
FOR THE YEAR 1897.

BOSTON, February 1, 1898.

HON. JOSIAH QUINCY,

Mayor of the City of Boston:

SIR: The Board of Street Commissioners present the following as the report of the Street Laying-Out Department, including a statement relating to public lands in their care, for the year ending January 31, 1898:

Under the orders for laying out, widening and extending streets passed by the Board during the year, land to the amount of about 52,858 square feet was taken for street purposes; the total estimated damages amounted to \$162,219.85. Streets having a total mileage of 11.38 were made public ways. Under authority of the Act of the Legislature of 1891, for the assessment upon abutting property of the cost of laying out and constructing streets, there has been assessed, upon five streets, a total of \$47,741.84.

The Board has issued ninety-four orders of notice of intention to lay out, widen, extend and discontinue streets, or parts

of streets, calling for public hearings; it has received and considered one hundred and one petitions for street improvements, and for hearings in the matter of payment for damages occasioned by street improvements thirty-four petitions. Upon petitions in the matter of payment for damages sixteen hearings have been given, and nineteen settlements reached. Six petitions for release of sewer assessments have been received, and six releases made by the Board, under authority of the act empowering them to release parts of estates from assessments for sewers and sidewalks upon payment of the proportional parts due upon the parcels released.

Under authority of chapter 426 of the Acts of the Legislature of 1897 the Street Commissioners have passed orders for the improvement and relocation of various natural streams or water-courses, and supplied surface drainage for territories needing it, as follows: Sections of the water-course, in Dorchester, known as Tenean creek or Smelt brook, have been ordered widened, deepened, paved, covered or relocated as needed, between Elm street and Park street, between Templeton street and Shelton street, between Park street and Westville street, between Gibson street and Centre street, between Ashmont street and Lonsdale street, and between King street and Dorchester avenue; the Oakland Garden fork of the Canterbury branch of Stony brook has been located in a new channel, from Park street to Columbia road, at Dorchester, and surface drainage has been provided for land at Ashmont street, Dorchester, at Branch avenue, Dorchester, for Chiswick road, Brighton, and for Capen street, Dorchester.

Sewers have been ordered built in the following public streets:

Ashmont street, Dorchester, between Neponset avenue and Train street.

Adelaide street, West Roxbury, between Spring Park avenue and existing sewer.

Atlantic avenue, City Proper, between South Market street and Commercial wharf.

Allen street, City Proper, between Brighton and Charles streets.

Ashmont street, Dorchester, from culvert to Bruce street.

Brown avenue, West Roxbury, Florence street to Ashland street.

Brook street, West Roxbury, Sycamore street to Florence street.

Brookside avenue, West Roxbury.

Berwick road, Brighton, between Commonwealth avenue and Chiswick road.

Bryant street, Roxbury, between Huntington avenue and Parker street.

Bothnia street, City Proper, between Cambria and Boylston streets.

Boylston street, City Proper, between Bothnia street and Massachusetts avenue.

Binney street, Roxbury, between Longwood avenue and Smyrna street.

Barton street, City Proper, between Milton and Chambers streets.

Bremen street, East Boston, two hundred feet east of Brooks street to Putnam street.

Bushnell street, Dorchester, between Weyanoke and Rowena streets.

B street, South Boston, between Dorchester avenue and Fifth street.

Beech street, West Roxbury, two hundred feet south from Newburg street.

Chiswick road, Brighton, Sidlaw road to Chestnut Hill avenue.

Capen street, Dorchester, between Fuller and Norfolk streets.

Carlisle street, Dorchester, from Samoset street.

Coffey street, Dorchester.

Columbus avenue, Roxbury, between Old Heath and Ritchie streets.

Columbus avenue, Roxbury, between Roxbury Crossing and Cedar street.

Columbus avenue, Roxbury, between Roxbury Crossing and Old Heath street.

Covington street, South Boston, between Eighth street and Thomas park.

Charles street, City Proper, between Allen and Charles streets.

Cambridge street, Brighton, Charles river to Seattle street.

Commercial street, City Proper, between State and Clinton streets.

Cambridge street, Brighton, between Seattle and North Harvard streets.

Commonwealth avenue, Brighton, Sidlaw road to Strathmore road.

Dorchester avenue, South Boston, between B and Doir streets.

Dorchester street, South Boston, between Emerson and East Second streets.

East Fourth street, South Boston, between I and Jay streets.

Elmo street, Dorchester, from Greenwood street, 600 feet westerly.

Ellingwood street, Roxbury, to connect with public sewer in Lawn street.

Evans street, Dorchester, from Capen street, 170 feet westerly.

Eldora street, Roxbury, from Hillside street, 120 feet south-west.

Evans street, Dorchester, Morton street to sewer, 170 feet west of Capen street.

Evans street, Dorchester, between Capen and Stanton streets.

Elmo street, Dorchester, westerly to Erie street.

Florence street, West Roxbury, Sherwood street to Brown avenue.

Florence street, West Roxbury, to Washington street.

Fuller street, Dorchester, to Capen street.

First street, South Boston, from O street, 250 feet westerly.

Fletcher street, West Roxbury, from South street.

Fremont street, Dorchester, between River and Norfolk streets.

Fisher avenue, Roxbury, Parker street to Hayden street.

Garden street, West Roxbury, Sherwood street to Brown avenue.

Greenwood street, Dorchester, to Elmo street.

Hunneman street, City Proper, Harrison avenue to Fellows street.

Harrison avenue, Roxbury, between Massachusetts avenue and Eustis street.

Hutchins avenue, Roxbury, to Day street.

H street, South Boston, from Eighth street to tidewater.

Hyde Park avenue, West Roxbury, Stony brook to Wood-lawn street.

Irvington street, City Proper, St. Botolph street to Boston and Providence Railroad.

Kemp street, South Boston, from tidewater to Mt. Washington avenue.

Lincoln street, Brighton, Everett street to near Waverly street.

Leedsville street, Dorchester, between Dorchester avenue and Adams street.

Malden street, City Proper, from Harrison avenue to existing sewer.

Mozart street, Roxbury, between Armstrong and Centre streets.

Neponset avenue, between Bertram and Chickatawbut streets.

N street, South Boston, between Ninth street and tide-water.

North Beacon street, Brighton, between Everett street and Union square.

Newhall street, Dorchester, between Pierce and Ashmont streets.

Newhall avenue, Dorchester, from Newhall street.

Norfolk street, between Fremont street and Creek court.

Nelson street, Dorchester, between Selden and Norfolk streets.

Prospect avenue, West Roxbury, Sycamore street to Brown avenue.

Plain street, Dorchester, Pierce avenue to Chickatawbut street.

Perkins street, West Roxbury, between Jamaicaway and Centre street.

Parker Hill avenue, Roxbury, between Parker and Calumet streets.

Q street, South Boston, Sixth street to tidewater.

Ridge street, West Roxbury, Sycamore street to Brown avenue.

River street, Dorchester, to Fremont street.

Robinson street, Dorchester, from Adams street.

Rutherford avenue, Charlestown, south of Dunstable street, to Chapman street.

Sherwood street, West Roxbury, Ashland street to Florence street.

Sidlaw road, Brighton, from north of Commonwealth avenue to Chiswick road.

St. Botolph street, City Proper, Harcourt street to Irvington street.

Selden street, Dorchester, from Morton street.

Samoset street, Dorchester, from Carlisle street.

Sawyer avenue, Dorchester, from Downer avenue.

South street, West Roxbury, substitute way for.

Sheldon street, West Roxbury, between Ashland street and Prospect avenue.

Shelton street, Dorchester, between Adams and Bruce streets.

Stanwood street, Dorchester, between Columbia road and Normandy street.

Strathmore road, Brighton, between Commonwealth and Chestnut Hill avenues.

Stanwood street, Dorchester, between Blue Hill avenue and Normandy street.

Tolman street, Dorchester, between Neponset avenue and Norwood street.

Tudor street, South Boston, between F and Dorchester streets.

Walnut avenue, Roxbury, Rockland street to Pickering avenue.

Wiget street, City Proper.

Washington street, West Roxbury, from Florence street.

Warren avenue, City Proper, between Clarendon and Dartmouth streets.

Western avenue, Brighton, between North Harvard and Everett streets.

Wrentham street, Dorchester, from Dorchester avenue.

Walpole street, Roxbury, between Columbus avenue and Tremont street.

Washington street, Dorchester, from Miller's lane.

Washington street, Dorchester, from Dorchester Lower Mills.

Wabeno street, Roxbury, between Wabon and Wyoming streets.

Washington street, Brighton, between Nantasket and Commonwealth avenues.

Walter street, West Roxbury, from Proctor street.

Wessex street, Dorchester, between Shenandoah and Weyanoke streets.

Woodside avenue, West Roxbury, Washington street to Forest Hills street.

The sewers that have been ordered in private streets were for Dumas street, Mountain avenue, Lyons street, Oak terrace, Chapman avenue, Coffey street, Oak avenue, Newhall place, Bernard street, Weyanoke street, Mascot street, Jones avenue, Fuller street, Faxon street, and Middleton avenue, at Dorchester; Birch street, Fairview street, Proctor street, Selwyn street, Anson street, and Morrison street, at West Roxbury; Fellows street, Fisher avenue, and Adams place, at Roxbury; Dorr street, at South Boston; Webster street, at Brighton; Roland street, at Charlestown; and Ashley avenue, at East Boston.

The following is a list of the new streets, with their lengths, laid out as public ways during the year, with a

statement of the widenings, relocations, extensions and discontinuances of the public streets:

BOSTON PROPER.

STREET.	FEET.
¹ Summer, from Purchase street to Harbor Commissioners' line in Fort Point channel, extension of, laid out.	845.33
¹ Cove, from Kneeland street to Summer street, extension of, laid out.	
¹ Dorchester avenue, over and including Federal-street bridge, to Summer street extended, extension of, laid out.	1,970.00
Tremont and Boylston, at their junction, widened, 4.12 square feet taken.	
Tremont, corner of Boylston street, discontinued, 2.06 square feet discontinued.	
Boylston, corner of Tremont street, discontinued, 2.06 square feet discontinued.	
Congress, from Atlantic avenue to Fort Point Channel, relocated.	
² Queensberry, from Audubon road to another part of said Audubon road, laid out, and building line established	1,737.74
³ Belvidere, extension from Dalton street to West Newton street, laid out	458.39
⁴ Ipswich, from Boylston road, across Back Bay Fens to Boylston street, laid out	2,361.22
³ St. Stephen, extension to Bryant street, laid out	803.25
⁵ Beacon, from Arlington street to Massachusetts avenue, relocated and building line established.	
⁶ Astor, from Massachusetts avenue to Parker street, laid out	872.16
	9,048 09

¹ Under authority of chapter 516 of the Acts of the Legislature of 1896.

² Under authority of Acts of the Legislature, chapters 323 of 1891, 462 of 1893 and 439 of 1894.

³ Under authority of chapter 323 of the Acts of the Legislature of 1891, and amendments thereto.

⁴ Under authority of Acts of the Legislature, chapter 323 of 1891, and amendments thereto, and chapter 523 of 1897.

⁵ Under general highway law, and authority of chapter 462 of the Acts of the Legislature of 1893.

⁶ Under authority of Acts of the Legislature, chapter 323 of 1891, and amendments, and chapter 394 of 1897.

EAST BOSTON.

STREET.	FEET.
Marginal, south-east from Jeffries street, laid out	467.00

SOUTH BOSTON.

Covington, from Thomas park to East Eighth street, laid out	265.49
Jay, from East fourth street to East Fifth street, laid out	250.14
¹ Columbia road, from Franklin park to Marine park, laid out and part of designated as a parkway	6,485.00
	<u>7,000.63</u>

ROXBURY.

Pequot, from Calumet street to Wait street, laid out	144.00
Rand, from Julian street to Brookford street, laid out	321.70
Wait, from Huntington avenue to Hillside street, relocated, 6,862 square feet taken.	
Centre, from Highland street to Penryth street, relocated.	
Washington and Bartlett, at their junction, widened, 186 square feet taken.	
Whitney, between Smith street and Conant street, widened, 1,778 square feet taken.	
Harold, at Hutchins and Seaver streets, relocated, 1,777 square feet taken.	
² Harold, from Munroe street to Walnut avenue, laid out	758.04
² Wensley, from Heath street to Bickford avenue, laid out	713.00
	<u>1,936.74</u>

DORCHESTER.

Old road, between Glenway street and Charlotte street, discontinuance of 24,472 square feet.

¹ Under authority of Acts of the Legislature, chapter 323 of 1891, and amendments, and chapter 394 of 1897.

² Under authority of chapter 323 of the Acts of the Legislature of 1891, and amendments thereto.

STREET.	FEET.
Page, from McLellan street to Glenway street, laid out	390.67
¹ Fairmount, from Washington street to Morton street, laid out	2,660.99
¹ Burt, from Ashmont street to Washington street, laid out	1,372.00
¹ Greenbrier, from Bloomfield street to Park street, laid out	845.69
¹ Tonawanda, from Geneva avenue to Greenbrier street, laid out	1,917.00
¹ Bloomfield, from Geneva avenue to Greenbrier street, laid out	1,554.00
¹ Rosseter, from Bullard street to Bowdoin avenue, laid out	850.00
Locust, from Dorchester avenue to Button- wood street, laid out	240.00
² Columbia road, from Franklin park to Marine park, laid out and part of designated as a parkway	2,150.00
¹ Bernard, from Harvard street to Talbot avenue, laid out	1,406.00
¹ Waterlow, from Harvard street to Harvard street, laid out	545.00
¹ Leroy, from Geneva avenue to Ditson street, laid out	719.00
River, northerly side, near the Hyde Park line, widened, 275.5 square feet taken.	
River, near the Hyde Park line, adjoining estate of Francis J. Obert, discontinuance, 80 square feet discontinued.	
¹ Peverell, from Sawyer avenue to Salcombe street, laid out	487.00
Adams, from Parkman street to Park street, westerly side, widened, 8,323 square feet taken.	
Freeport, between Park street and Capen street, relocated, 1,539 square feet taken.	
¹ Oakley, from Bowdoin street to Geneva avenue, laid out	823.00
¹ Idaho, from River street, laid out	852.70
Wessex, from Codman street to Weyanoke street, laid out	374.52

¹ Under authority of chapter 323 of the Acts of the Legislature of 1891, and amendments thereto

² Under authority of Acts of the Legislature, chapter 323 of 1891, and amendments, and chapter 394 of 1897.

STREET.	FEET.
Dromey, from Judson street to Brookford street, laid out	213.00
Van Winkle, from Carruth street to Randolph terrace, laid out	405.96
Bushnell, from Beale street to Weyanoke street, and over the private way known as Randolph terrace, laid out	479.28
¹ Chamblet, from Magnolia street to Hartford street, laid out	445.55
¹ Carlos, from Lauriat avenue to Chapman avenue, laid out	300.00
¹ Leedsville, from Dorchester avenue to Adams street, laid out	572.00
² Lonsdale, from Dorchester avenue to Adams street, laid out	1,626.00
¹ Nightingale, from Talbot avenue to Bernard street, laid out	1,461.97
¹ West Selden, from Morton street, laid out .	3,411.00
¹ School, at corner of Athelwold street, widened, 548 square feet taken.	
¹ Barrington, from Bowdoin street to Holmes avenue, laid out	945.41
¹ Maryland, from Savin Hill avenue to Bay street, laid out	478.72
Robin Hood, from Magnolia street to Hartford street, laid out	798.54
	28,325.00

WEST ROXBURY.

¹ Belmore terrace, from Boylston street to Boylston terrace, laid out	272.00
¹ Woodlawn, from Hyde Park avenue to Forest Hills Cemetery, laid out	1,061.74
St. Rose, from Jamaica street, laid out	594.54
	1,928.28

BRIGHTON.

¹ Cambridge, corner of Warren street, widened, 8,129 square feet taken.	
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¹ Under authority of chapter 323 of the Acts of the Legislature of 1891, and amendments thereto.

² Under authority of Acts of the Legislature, chapter 323 of 1891, and amendments, and Chapter 166 of 1897.

STREET.	FEET.
Menlo, near Sparhawk street, relocated.	
Bayard, from North Harvard street to Kenneth street, laid out	627.83
Surrey, from Parsons street to Market street, laid out	555.19
¹ Chiswick road, from Englewood avenue to Chestnut Hill avenue, construction ordered.	
¹ Malvern, from Brighton avenue to Ashford street, laid out	702.29
Hardwick, from Bigelow street to Dunboy street, laid out	725.54
¹ Sidlaw road, from Commonwealth avenue to Chiswick road, laid out	326.00
¹ Kilsyth road, from Lanark road to the Brookline boundary line, laid out	1,360.00
¹ Lanark road, from Kinross road to the Brookline boundary line, laid out	1,388.30
¹ Colliston road, from Kilsyth road to Lanark road, laid out	350.00
¹ Lothian road, from Strathmore road to Chiswick road, laid out	345.00
¹ Selkirk road, from Chiswick road to Kilsyth road, laid out	690.00
¹ Braemore road, from Commonwealth avenue to Chiswick road, laid out	425.00
¹ Kinross road, from Commonwealth avenue to Sutherland road, laid out	570.00
Bentley, from Henshaw street to Sparhawk street, laid out	506.40
Newton, extension of, from former termination as a public way to Charlesview street, laid out,	270.79
Elmira, from George street to Market street, laid out	1,040.31
Brooks, between Holton street and North Beacon street, relocated, and extension of, laid out,	692.00
Myrick, from Franklin street to Bayard street, laid out	299.15
Charlesview, from Bigelow street to Newton street, laid out	363.00
	11,236.80

¹ Under authority of chapter 323 of the Acts of the Legislature of 1891, and amendments thereto.

CHARLESTOWN.

STREET.	FEET.
Beacham, extension to Main street, laid out .	162.42
Alford, from Main street to Mystic river, widened, 21,210 square feet taken.	
Green, between Main street and High street, widened, 2,227 square feet taken.	

RECAPITULATION.

DISTRICT.	FEET.
Boston Proper	9,048.09
East Boston	467.00
South Boston	7,000.63
Roxbury	1,936.74
Dorchester	28,325.00
West Roxbury	1,928.28
Brighton	11,236.80
Charlestown	162.42

60,104.96=11.38 miles.

The estimated expense of the street improvements ordered in 1897, not including construction, is as follows:

Pequot street, laid out, from Calumet street to Wait street, Roxbury	\$4,863 00
Queensberry street, laid out, from Audubon road to Audubon road, Back Bay	112,904 00
Malvern street, laid out, from Brighton avenue to Ashford street, Brighton	650 00
Beacham street, extended to Main street, Charlestown	5,360 00
Peverell street, laid out, from Sawyer avenue to Salcombe street, Dorchester	3,345 00
Belvidere street, extended from Dalton street to West Newton street	14,904 00
Wait street, widened, Roxbury	4,117 20
Green street, widened, from Main street to High street, Charlestown	5,933 25
Barrington street, laid out, from Bowdoin street to Homes avenue, Dorchester	4,085 00
Washington and Bartlett streets, widened, at their junction, Roxbury	279 00
<i>Carried forward</i>	\$156,440 45

<i>Brought forward</i>	\$156,440 45
Whitney street, widened, from Smith street to Conant street, Roxbury	4,957 00
Harold street, relocated, at junction with Hutchins street at Seaver street, Roxbury	822 40
	<u>\$162,219 85</u>

ASSESSMENTS FOR LAYING-OUT AND CONSTRUCTION OF STREETS.

Assessments have been levied upon the estates abutting upon the following streets, under the provisions of chapter 323 of the Acts of the Legislature of 1891, and acts in amendment or addition thereto :

STREET.	Date of order.	Cost.	Amount Assessed.	Date of Assessment.
Greenbrier	Sept. 19, 1895	\$19,173 55	\$19,173 55	May 22, 1897
Josephine	Sept. 7, 1895	5,263 94	5,263 94	May 22, 1897
Abbotsford.....	Sept. 19, 1895	6,523 28	6,523 28	May 25, 1897
Granby.....	Aug. 15, 1895	5,541 57	5,541 57	June 21, 1897
Bay State road.....	Aug. 15, 1895	11,239 50	11,239 50	June 21, 1897
		\$47,741 84	\$47,741 84	

Payments made for land damages and other claims, on account of laying out, widening, relocating and extending streets, including claims previous to January 31, 1897 :

STREET LAYING-OUT DEPARTMENT APPROPRIATION.

Lake street, Brighton	\$432 38
River street, Dorchester	1,000 00
Washington street, Dorchester	225 00
Weld street, West Roxbury	100 00
Talbot avenue, Dorchester	137 29
	<u>\$1,894 67</u>

PAYMENTS MADE FROM OTHER APPROPRIATIONS.

Essex and Lincoln streets	\$57,122 08
Centre street, Dorchester	1,909 50
<i>Carried forward</i>	\$59,031 58

<i>Brought forward</i>	\$59,031 58
Washington street, Brighton	500 00
St. Martin street, Charlestown	820 00
Abbotsford street, Roxbury	15 00
Extension of Columbus avenue	4,357 00
Calumet street, Roxbury	5,299 62
Weld street, West Roxbury	4,248 00
Pontine street, Dorchester	7,000 00
Wait street, Roxbury	4,117 20
Green street, Charlestown	3,372 00
Whitney street, Roxbury	1,919 00

Laying-Out and Construction of Highways:

Greenbrier street	\$2,468 00	
Clinton street	137,145 47	
Blue Hill avenue	1,051 06	
Athelwold street	1,300 00	
Ipswich street	52,115 50	
Audubon road	29,904 79	
		223,984 82

Blue Hill and other avenues:

Columbus avenue	\$320,955 53	
Huntington avenue	13,991 68	
Blue Hill avenue	13,515 97	
Commonwealth avenue	10,600 00	
		359,063 18
		<u>\$673,727 40</u>

EXPENDITURES.

Salaries and other Expenses.

John P. Dore	\$4,500 00	
John H. Duane	4,000 00	
George H. Innis	4,000 00	
Secretary	3,000 00	
Stenographer and typewriter	993 14	
Messenger	764 12	
		\$17,257 26
Advertising	\$1,910 44	
Carriage-hire	244 00	
Stationery and printing	292 45	
Atlases, maps and books	137 50	
Telephone service	234 35	
<i>Carried forward</i>	\$2,818 74	\$17,257 26

<i>Brought forward</i>	.	.	\$2,818 74	\$17,257 26
Service of notices	.	.	49 16	
Services of appraisers	.	.	500 00	
Messenger service	.	.	21 52	
Expenses, visit of Board to other cities	.	.	1,000 00	
Expense of small fittings for office,			316 42	
Small supplies for office	.	.	36 25	
Expenses, annual report	.	.	200 00	
				4,942 09
				\$22,199 35

Public Lands.

Repairs on Webb School building, East Boston	.	.	\$26 13	
Care of Webb School building	.	.	5 00	
Care of Thomas-street School building	.	.	25 00	
Care of Thornton-street School building	.	.	10 00	
Expenses, demolition old Dorchester Lock-up	.	.	108 75	
Taxes, town of Hull	\$45 92			
City of Everett	18 70			
Land, Parkman street	3 90			
				68 52
				243 40
				<u>\$22,442 75</u>

The yearly rentals of lands and buildings in charge of the Board of Street Commissioners amount to \$2,393.

The expenditures of the Surveying Division of the Street Laying-Out Department have been as follows:

Salaries	.	.	.	.	\$51,859 86
Instruments and repairs	.	.	.	.	124 40
Surveyors' supplies	.	.	.	.	2,994 25
Stationery and printing stock	.	.	.	.	251 03
Printing	.	.	.	.	50 04
Books and maps	.	.	.	.	477 00
Travelling expenses	.	.	.	.	69 00
Car-fares, employees	.	.	.	.	943 70
<i>Carried forward</i>	.	.	.	.	\$56,769 28

<i>Brought forward</i>	.	.	.	.	.	\$56,769	28
Telephone service	.	.	.	.	.	140	00
Office fittings	.	.	.	.	.	821	90
Incidental expenses	.	.	.	.	.	27	76
Advertising	.	.	.	.	.	127	40
							\$57,886 34

AUTHORITY GIVEN TO OPEN NEW STREETS.

Acting under the provisions of chapter 323 of the Acts of the Legislature of 1891, and acts in amendment thereof, the Board of Street Commissioners have, during the past year, given permission to land-owners to open the following private ways :

City Proper.

Sears street, from India street to Central Wharf.

Roxbury.

Loyola street, from Edgewood street to Maywood street.

Theresa street, from Edgewood street to Loyola street.

Cranford street, from Heath street to Floyd street.

Basswood street, from Cranford street to South Huntington avenue.

Floyd street, from Cranford street to South Huntington avenue.

Harrishof street, from Walnut avenue to Dennison street.

Dennison street, from Harrishof street.

Haley street, from Harrishof street to Dennison street.

Adrian street, from Blue Hill avenue to Dacia street.

Gayland street, from West Cottage street to Judson street.

Delle avenue, from Burney street, northwestwardly.

Carmel street, from Tremont street to Delle avenue.

**Perth street*, from Quincy street to Phipps avenue.

Mellen street, from Fisher avenue, eastwardly.

McCarthy place, from Tremont street, southwestwardly.

Dorchester.

Elmhurst street, from Norfolk street to Southern avenue.

Ferndale street, from Norfolk street, northwardly.

Rosemont street, from Dorchester avenue to Samoset street.

Samoset street, from Welles avenue, northwardly.

Santuit street, from Welles avenue to Rosemont street.

Mallet street, from Adams street to Shawmut park.
Coffin street, from Savin Hill avenue to Springdale street.
White terrace, from Lauriat avenue to Jones avenue.
Wellesley park, from Park street to Melville avenue.
Joseph street, from Carlisle street to Melbourne street.
Brent street, from Carlisle street to Melbourne street.
Russ terrace, from Savin Hill avenue, southeastwardly.
Westwood street, from Geneva avenue, northeastwardly.
Beechwood street, from Geneva avenue, northeastwardly.
Drayton avenue, from Quincy street to Bodwell street.
Claybourne street, from Bowdoin street, southeastwardly.
* *Kilton street*, from Washington street to Faxon street.
* *Rupert street*, from Kilton street, southeastwardly.
Alpha street, from Waldeck street to Park street.
Ballou avenue, an extension of, eastwardly.
Jacob street, from Ballou avenue to Jones avenue.
Dawson street, from Templeton street to Mallet street.
Chase street, from East Cottage street to Willis street.

West Roxbury.

Congreve street, from Centre street, southeastwardly.
Fletcher street, from Centre street to Montclair avenue.
Wiedemann street, from Canterbury street to Stony brook.
Rosemary street, from South street to land of N.Y., N. H. and H. R.R. Company.
Maple street, from Weld street to Addington road.
Avalon road, from Weld street to Gould avenue.
Chilton road, from Weld street to Gould avenue.
Addington road, from Weld street to Maple street.
Newsome park, from Eliot street, eastwardly.
Spalding street, from South street, eastwardly.
Dixwell street, from Columbus avenue, southwestwardly.
Whittemore street, from Montview street to Crest street.
Marmion street, an extension of, northeastwardly.
Argyle street, an extension of, northeastwardly, to Baker court.

Brighton.

Easton street, from Mansfield street to North Harvard street.
Brackett street, from Washington street to Faneuil street.
Montfern avenue, from Washington street to Faneuil street.
Oak Square avenue, from Washington street to Faneuil street.

PUBLIC LANDS.

The following is a list of the real estate belonging to the City in charge of the Board of Street Commissioners :

<i>City Proper.</i>		
DESCRIPTION.		SQUARE FEET.
Harrison avenue, corner of Wareham street, land and building		3,816
Leased at \$1,050 a year.		
Albany street, land opposite East Brookline street		1,074
Rented for \$100 a year.		
Harrison avenue, land between Brookline and Newton streets		4,740
<i>East Boston.</i>		
Porter street, Webb School estate		7,492
Paris street, Austin School estate		5,360
<i>South Boston.</i>		
East First and L streets, land		33,700
East First and L streets, flats		50,000
<i>Charlestown.</i>		
Rutherford avenue, land on northeast side		29,445
Small part of rented at \$12 a year.		
Remainder occupied by City Departments.		
<i>Roxbury.</i>		
Swett street, land and buildings, old small-pox hospital		111,431
10,660 square feet leased for five years from November 1, 1894, for \$300 a year.		
Old small-pox hospital rented for \$300 a year.		
About 42,000 square feet set aside for use of Fire Department, by order of the City Council, approved April 30, 1892. This part now occupied by buildings of a hospital for contagious diseases in charge of the Board of Health.		
Ritchie street, land opposite the Marcella-street Home		22,716
Thornton street, Thornton-street Primary School estate		6,644

Dorchester.

DESCRIPTION.	SQUARE FEET.
Dorchester avenue and Gibson street	208,750
42,000 square feet rented to Sewer Division of Street Department at \$150 a year.	
32,600 square feet rented to Boston Water Board at \$125 a year.	
52,200 square feet rented to Paving Division of Street Department at \$200 a year.	
Gibson street, land on southerly side, near Dor- chester avenue	27,040
Gibson street, land on southerly side, near Adams street	27,890
Pasturage of grass land on east side of Dor- chester avenue rented for \$55 a year.	
Blue Hill avenue, from Glenway-street to McLel- lan street, adjoining Glenway-street Pri- mary School estate; part of Old Road, so-called, discontinued	13,040
Baker's court, old lock-up estate	1,580

West Roxbury.

Moreland street, land	30,421
Thomas street, Thomas-street Primary School estate	10,954

Brighton.

Western avenue, marsh, northeast of Western avenue and northwest of North Harvard street	10,890
Parkman street, land on southwest side of	5,000

Islands, etc.

Great Brewster Island, Boston Harbor, about 16 acres. Rented for \$100 a year.	
Apple Island, Boston Harbor, about 9½ acres.	
Summer and Pleasant streets, in town of Everett, old gravel pits	20,700

Chapter 408 of the Acts of the Legislature of 1895 provided that the Board of Street Commissioners, at the request of the School Committee, shall take by purchase or otherwise, such lands for school purposes as the School Committee, with the approval of the Mayor, shall designate, etc., and

that the damages sustained by any person under such taking shall be determined by agreement between said Board and person, etc. Under this act the Board have taken during the year the following lands:

LOCATION.	School.	From whom Taken	Date of Taking.
Thomas Park and G street.	South Boston High.	City of Boston....	September 14, 1897
Athelwold street.....	Gibson.....	Andrew J. Vose...	November 9, 1897
Dorchester avenue.....	Gilbert Stuart.....	Teele and Humphreys, trustees.	November 17, 1897
Marion, Saratoga and Princeton streets.....	East Boston High..	C. U. Cotting, trustee, and others...	December 17, 1897
School street.....	George Putnam....	Isidore Marcus....	January 14, 1898

The following reports and estimates of the cost of proposed street widenings, extensions, etc., on orders of the City Council, have been made during the year:

Broadway, extension from Washington street to Park square, by widening Pleasant street to a width of sixty feet.

Carleton street, City Proper, laying out and construction, from West Rutland square to Wellington street.

Whitney street, Roxbury, widening from Smith street to Conant street.

Boston street, Dorchester, widening from the Dorchesterway to Stoughton street, to a width of eighty feet.

Columbia street, Dorchester, from Hancock street to Blue Hill avenue, to a width of eighty feet.

Capen street, Dorchester, laying out and constructing from Evans street to Selden street.

Highland Park street, Roxbury, extension to Cedar street.

Beacon street, City Proper, building line from Commonwealth avenue to St. Mary's street.

Washington street, West Roxbury, widening Metropolitan avenue to Beech street.

Wordsworth street, East Boston, cost of construction between Saratoga street and Pope street.

Exchange street, City Proper, widening on easterly side, from State street to Dock square.

Leonard street, Dorchester, extension through Gordon place to Adams street.

St. Stephen street, City Proper, extension to Bryant street.

Greenwood avenue, West Roxbury, laying out from Washington street to Forest Hills street.

Boylston street, West Roxbury, extension through Chauncy place, from Washington street to Walnut avenue.

Howes street, Dorchester, laying out and extension from Dorchester avenue to Pleasant street.

Belvidere street, City Proper, extension of, Dalton street to West Newton street.

Fessenden court, East Boston, laying out and widening from Webster street.

Leeds street, South Boston, laying out and extension from Woodward street to Dorchester avenue.

Willow court, Dorchester, extension to Massachusetts avenue.

Vale street, South Boston, construction from Dorchester avenue to Mercer street.

Public square, West Roxbury, bounded by Washington, South and Ashland streets.

Cross street, and other streets, City Proper, widening from Haymarket square to Atlantic avenue.

SURVEYING DIVISION.

The working force of the surveying division of the Street Laying-Out Department was reduced during the greater part of the past year by the transfer of three surveying parties to other work. For this reason only forty-three sectional plans have been plotted and filed, in comparison with sixty-five filed the preceding year.

The three surveying parties mentioned have been engaged on surveys for the laying out of Columbia road, on work for the Water Department, and on surveys of sewerage work, made necessary by the provisions of chapter 426 of the Acts of 1897.

This work has been done for the City Engineer, under the direction of the Board of Street Commissioners, a detailed account of which will be found in the report of the Engineering Department.

The several surveying and grade parties working on plans showing proposed streets for the development of territory in the outlying districts, under the provisions of chapter 323 of the Acts of 1891, and acts in amendment thereto, have been employed during the past year making surveys in the following districts:

Dorchester.

Plan 5—Sections X 55, X 66, near and south of Franklin Field.

Plan 6—Sections X 89, X 90, west of Blue Hill avenue, near Walk Hill street.

Plan 12 — Sections X 71, X 72, Y 100, and Dd 1, Dd 2, Dd 18, Dd 19, Dd 20, Dd 21, Dd 40, west of Blue Hill avenue, and between Morton street and the Hyde Park town line.

Brighton.

Plan 8 — Sections O 45, O 46, O 47, O 48, O 49, O 50, O 52, O 53, O 56, O 68, O 69, vicinity of Lake and Kenrick streets and Newton boundary line.

West Roxbury.

Plan 10 — Sections Cc 46, Cc 47, Cc 54, Cc 55, Cc 66, Cc 67, Cc 75, Germantown and vicinity.

Plans 10 and 11 — Section Z 93.

Plan 11 — Sections Z 72, Z 73, Z 88, Z 89, Z 90, vicinity of Spring-street station.

Plan 12 — Section Y 40.

Plans 12 and 13 — Sections X 31, X 32, near Morton and Canterbury streets.

Roxbury.

Plan 13 --- Sections S 18, S 23, south of Heath street and east of Parkway.

Plans were prepared for six public hearings given by the Street Commissioners at Room 25, Old Court House, to all persons interested in the several districts considered. These hearings included 72 sections, showing territory covering about 1,589 acres, and were given on the following dates:

July 2. — Territory bounded approximately by Nonantum street, Washington street, Lake street and the Newton boundary line, Brighton. Sections O 31, O 32, O 33, O 34, O 48, O 49, O 50, O 52, O 53, shown on Plan 8.

July 9. — Territory bounded approximately by Walk Hill street, Paine street, Canterbury street, Neponset avenue and the Providence Division of the New York, New Haven and Hartford Railroad, West Roxbury. Sections Y 36, Y 37, Y 43, Y 44, Y 45, Y 56, Y 57, Y 58, Y 59, Y 62, Y 63, shown on Plan 12.

July 16. — Territory bounded approximately by Perkins street, Jamaica way, Pond street and Centre street, West Roxbury. Sections S 36, S 37, S 38, S 43, S 44, S 45, S 56, S 57, shown on Plan 13.

Nov. 12. — Territory bounded approximately by West Roxbury Branch Railroad, Spring street, Baker street, Gardner street, Adams street, Farragut street, Baker street, Weld street, La Grange street, Vermont street and Corey

street, West Roxbury. Sections Z 52, Z 53, Z 54, Z 55, Z 66, Z 67, Z 68, Z 69, Z 71, Z 72, Z 73, Z 74, shown on Plan 11.

Sections Z 75, Z 93, shown on Plans 10 and 11.

Sections Z 88, Z 89, Z 90, shown on Plan 11.

Nov. 19. — Territory bounded approximately by Blue Hill avenue, Talbot avenue, Kingsdale street, New England Railroad, Talbot avenue, Washington street, Fuller street, Capen street, Selden street, Morton street, Hunter street, Ballou avenue, Mountain avenue, Lauriat avenue, Carlos street, Chapman avenue, Lyons street and Franklin Field, Dorchester. Sections X 34, X 35, X 36, X 43, X 44, X 45, X 46, X 55, X 56, X 57, X 58, X 63, X 64, X 65, X 66, X 75, X 76, X 77, X 78, shown on Plan 5.

Nov. 26. — Territory bounded approximately by Oakland street, Blue Hill avenue, Neponset river and Hyde Park line, Dorchester. Sections Ee 29, Ee 30, Ee 31, Ee 32, Ee 49, Ee 50, shown on Plan 6.

Sections Dd 21, Dd 40, shown on Plan 12.

Stone Monuments.

During the months of April and May, 150 stone bounds were set in the different sections of the city, as follows:

Roxbury — Grove Hall and vicinity	25
Brighton — Aberdeen District	30
West Roxbury — Centre, Washington and Grove streets, etc.	22
Columbus avenue — near baseball grounds	8
Dorchester — Morton street, Blue Hill avenue, etc.	20
West Roxbury — Canterbury, Morton and Walk Hill streets	15
South Bay — Massachusetts avenue, Boston street, etc., ...	5
Roxbury — Heath, Day and Perkins streets	10
Back Bay — Brookline avenue, Beacon street and vicinity	15
Total	150

These monuments were usually placed with relation to the street lines, in most cases upon an offset line of four feet; they were set in concrete, the tops being flush with the surface of the ground and the location of each is given upon the plans.

Later in the season these monuments were centred with a small drill-hole in the top, so that they are now available

for the use of the city departments, and all private surveyors for determining correct street lines, etc.

Triangulation Work.

But little time was devoted to triangulation work the past year on account of the surveying party having this work in charge, being engaged most of the time on surveys for sectional plans.

The following table gives the number of times the several stations were visited, and the number of angles taken at each position :

NAME OF STATION.	No. of times visited between February 1, 1897, and Feb- ruary 1, 1898.	No. of angles taken between February 1, 1897, and Febru- ary 1, 1898.
Blue Hill.....	2	132
Bussey	1	66
Cambridge City Hall.....	5	534
Prospect, Waltham	1	204
Waban Reservoir	2	210
Totals	11	1,146

WORK IN REGISTRIES OF DEEDS.

The following table shows the amount of work performed in looking up titles and copying deeds, plans, etc., in the Suffolk, Norfolk and Middlesex Registries of Deeds for the Street Laying-Out Department :

LOCATION.	Plan.	Titles looked up.	Deeds copied.	Plans copied.
<i>Boston Proper.</i>				
Sections:				
N 60.....	1	} 28	16	12
M 49, 50, 51, 52, 70	1			
<i>Roxbury.</i>				
S 3, 22, 36, 37	13	22	13	1
<i>Carried forward.....</i>	15	50	29	13

WORK IN REGISTRIES OF DEEDS.—*Concluded.*

LOCATION.	Plan.	Titles looked up.	Deeds copied.	Plans copied.
<i>Brought forward</i>	15	50	29	13
T 53, 54, 64, 67, 68, 74.....	13, 14	228	228	22
<i>Dorchester.</i>				
Dd 1, 19, 20, 40.....	10	51	6	
X 55, 56, 57, 66, 75.....	5	1,347	1,073	85
<i>West Roxbury.</i>				
Y 36, 37, 43, 45, 56, 59, 61, 65, 76, 78..	12	417	417	48
Z 71, 72, 73, 89, 90, 93.....	11	205	97	1
Cc 54, 55, 66, 67	10	112	10	
<i>Brighton.</i>				
O 27, 34, 45, 47, 48, 49, 50, 52, 53, 56, 58, 69	8	223	130	38
		2,633	1,990	207

The seven plans where work has been progressing, are now considered separately, a complete description of each being presented together with a statement giving the percentage of all territory absorbed by all streets, the length of all streets in feet and miles etc., etc.

PLAN 5.

A second hearing was given on November 19, on the territory bounded approximately by Talbot avenue, Washington street, Fuller street, Morton street and Blue Hill avenue.

The system displayed at this hearing consisted of the adoption of many of the private streets which had been previously projected or suggested, and the adjustment of the existing streets with the new ones introduced, a number of the latter for the purpose of making sub-divisions of the larger blocks.

Provision was shown for the extension of Wales street and of Kingsdale street to Talbot avenue. The narrow tract of land lying between Norfolk street and the tracks of the New England Railroad to be provided with a 40-foot street, parallel with, and for a short distance adjoining the latter, and near the junction of the railroad and Norfolk street, turned right angles and projected across Norfolk street to Evans street, while two short lateral streets depart from it to Capen street, between Norfolk street and Evans street. A proposed street, 40 feet wide, is shown, extended from the bend in Dyer street to Norfolk street.

A 40-foot street is shown, connecting Milton avenue with Stanton street, midway from either end of the latter.

Very near the centre of this territory lies a large tract of land containing about 20 acres, which has been held in trust for Harvard College, and has remained undeveloped for many years, while the surrounding territory has been steadily growing, and has left this land enclosed, until the area now presents the appearance of a hollow square.

In a manner this enclosure may be considered detrimental to a prosperous growth of its neighborhood, abruptly terminating as it does, many of the streets into dead ends.

The system here shown provides for the development of this tract, affording relief to the contiguous and adjacent streets, permitting them to be extended, and in a manner which it is hoped will be satisfactory to all interested owners and residents. Principal among these improvements may be mentioned that of a proposed extension of Ashmont street, from Washington street to Milton avenue, at a width of 50 feet, connecting by a more direct route, the Ashmont station, on the New York, New Haven and Hartford Railroad, with Dorchester station, on the New England Railroad, to the obvious advantage of both localities, which would be much appreciated.

Dunbar avenue, at present a short and unimportant street, will be extended in a curved and by a straight line to Edson street, near its junction with Milton avenue.

Into this street will be projected, Learned street, Chipman street and Laurel street. Whitman street will be extended to Ashmont street, while Wentworth street will be extended beyond, to Fuller street.

Between the proposed extension of Ashmont street, and that of Dunbar avenue, will be located another new street, parallel to those streets, at a width of 40 feet, from Washington street to Wentworth-street extension.

A new street will be located along the northeasterly side

of the Second Parish Cemetery, connecting Southern avenue with Norfolk street. A widening is contemplated, of Norfolk street, which is destined to be a future great thoroughfare, to a width of 60 feet for its entire length.

The finished work on this plan during the year was confined to the filing of sections showing the result of work done in the territory adjacent to the south side of Franklin Field, and extending across Lauriat avenue towards Norfolk street.

The following is a statement of work done during the year:

Plan from actual survey of two sections, X 46 and X 55; size, 9 feet by 5 feet; scale, $\frac{1}{250}$. (Complete.)

Plan from actual survey of two sections, X 45 and X 56; size, 9 feet by 5 feet; scale, $\frac{1}{250}$. (In progress.)

Plan from actual survey of two sections, X 65 and X 76; size, 9 feet by 5 feet; scale, $\frac{1}{250}$. (In progress.)

Plan from actual survey of two sections, X 66 and X 75; size, 9 feet by 5 feet; scale, $\frac{1}{250}$. (In progress.)

One sectional plan of section X 55; size, 4 feet by 4 feet; scale, $\frac{1}{250}$. (Complete with grades.) This plan was approved by the Mayor, and filed January 26, 1898, with the City Engineer.

One sectional plan of Section X 66; size, 4 feet by 4 feet; scale, $\frac{1}{250}$. (Complete with grades.) This plan was approved by the Mayor, and filed January 31, 1898, with the City Engineer.

In this territory of about 45.92 acres covered by the above plans there are comprised:

Public streets:

Number of streets	.	.	.	.	.	2
Length	.	.	.	.	1,330 ft.	= 0.25 miles
Area	.	.	.	.	63,500 sq. ft.	= 1.46 acres

New streets established, private streets adopted and public streets proposed to be widened under chapter 323 of the Acts of 1891:

Number of streets	.	.	.	.	.	13
Length	.	.	.	.	7,780 ft	= 1.47 miles
Area	.	.	.	.	303,100 sq. ft.	= 6.96 acres

Totals:

Number of streets	.	.	.	.	.	15
Length	.	.	.	.	9,110 ft.	= 1.72 miles
Area	.	.	.	.	366,600 sq. ft.	= 8.42 acres

Percentage of above area absorbed by all streets, old and new, 18.3%.

Plan of territory showing Sections X 44, X 45, X 46, X 55, X 56, X 57, X 64, X 65, X 66, X 75, X 76, X 77; size, 6 feet by 5 feet; scale, $\frac{1}{1000}$. (In progress).

Plans and profiles completed, showing grades :

Mountain avenue, from Lauriat avenue to Ballou avenue.

Ballou avenue, from Jones avenue to line 27,000 feet south of State House.

Mascot street, from Mountain avenue to Ballou avenue.

Dumas street, from Willowwood street to Mascot street.

Jones avenue, from Ballou avenue to Mascot street.

Street No. 1629, from Norfolk street to street No. 1631.

Jacob street, from Ballou avenue to Jones avenue.

Grade plan of sections (X 55 and X 66 completed); scale, $\frac{1}{1000}$.

In connection with the sectional and other plans enumerated above the following work has been done :

Number of titles looked up	1,347
Number of conveyances copied	1,073
Number of plans copied from Suffolk and Norfolk Registries and elsewhere	85

PLAN 6.

A second hearing was held on November 26, on territory lying partly in Plan 6 and partly in Plan 12, and bounded approximately by Oakland street, Blue Hill avenue and the Neponset river. The work during the year on these two plans was so closely allied that it is scarcely possible to analyze it under the respective heads. The bulk of the territory treated lies within the borders of Plan 12, while the more important sections, those traversed by the Boulevard, Blue Hill avenue, falls within the limits of Plan 6. Considerable work, both in the field and in the office, has been done, and a number of plans have been filed, in the territory between Blue Hill avenue and Harvard street, almost as many as it is deemed expedient so to do, until the question of the elimination of the grade crossings of the New England Railroad, at Blue Hill avenue and Oakland street, has been determined.

With the filing of the sections contiguous to Blue Hill avenue, a system for the entire territory lying between Blue Hill avenue, Oakland street, Harvard street and Walk Hill street, will have been completed, the street lines and grades nicely determined, placing the land in a marketable shape, offering with its proximity to Blue Hill avenue, excellent

inducements for investment in realities here, or the location of residences.

Other plans were filed in the territory lying on the southern slope of Wellington Hill, extending across Harvard street and southerly across Walk Hill street, completing the plans showing the system devised for the neighborhood.

The following is a statement of the work done during the year :

Plan from actual survey of two sections, X 88 and X 89; size, 9 feet by 5 feet; scale, $\frac{1}{250}$. (Complete.)

Plan from actual survey of one section, X 90; size, 5 feet by 5 feet; scale, $\frac{1}{250}$. (Complete.)

Plan from actual survey of two sections, X 82 and X 99; size, 9 feet by 5 feet; scale, $\frac{1}{250}$. (In progress.)

Plan from actual survey of two sections, Ee 2 and Ee 19; size, 9 feet by 5 feet; scale, $\frac{1}{250}$. (In progress.)

Plan from actual survey of two sections; X 83 and X 98; size, 9 feet by 5 feet; scale, $\frac{1}{250}$. (In progress.)

Plan from actual survey of two sections; Ee 18 and Ee 23; size, 9 feet by 5 feet; scale, $\frac{1}{250}$. (In progress.)

Plan from actual survey of two sections; X 91 and X 92; size, 9 feet by 5 feet; scale, $\frac{1}{250}$. (In progress.)

Two sectional plans of Sections X 89 and X 90; size of each 4 feet by 4 feet; scale, $\frac{1}{250}$. (Complete with grades.)

These plans were approved by the Mayor, and filed September 8, 1897, with the City Engineer.

In this territory of about 45.92 acres covered by the above sectional plans there are comprised :

Public streets :

Number of streets	.	.	.	.	.	2
Length	.	.	.	.	1,560 ft.	= 0.25 miles
Area	.	.	.	.	53,560 sq. ft.	= 1.23 acres

New streets established, private streets adopted and public streets proposed to be widened under chapter 323 of the Acts of 1891.

Number of streets	.	.	.	.	.	13
Length	.	.	.	.	9,200 ft.	= 1.74 miles
Area	.	.	.	.	356,400 sq. ft.	= 8.18 acres

Totals :

Number of streets	.	.	.	.	.	14
Length	.	.	.	.	9,560 ft.	= 1.81 miles
Area	.	.	.	.	410,160 sq. ft.	= 9.42 acres

Percentage of area of above territory absorbed by all streets, old and new, 20.5%.

Plan of territory showing sections X 90, X 91, X 92, Ee 9, Ee 10, Ee 11 and Ee 12; size, 5 feet by 6 feet; scale, $\frac{1}{1000}$. (In progress.)

Plan of territory showing sections Ee 11, Ee 12, Ee 29, Ee 30, Ee 31, Ee 32, Ee 49 and Ee 50; size, 5 feet by 6 feet; scale, $\frac{1}{100}$. (In progress.)

Plans and profiles completed, showing grades of:

Duke street, from Ponemah street to Ormond street.

Tileston avenue, from Blue Hill avenue to line 28,000 feet south of State House.

Walk Hill street, from Blue Hill avenue to line 10,000 feet west of State House.

Ormand street, from Ponemah street to line 28,000 feet south of State House.

Ponemah street, from Blue Hill avenue to line 28,000 feet south of State House.

Dyer avenue, from Street No. 1265 to Street No. 1273.

Mattapan street, from Blue Hill avenue to Walk Hill street.

Tileston avenue, from Tileston avenue (No. 927) to Messinger street.

Street No. 1271, from Mattapan street to Almont street.

Street No. 1273, from Mattapan street to line 10,000 feet west of State House.

Street No. 1274, from Street No. 1275 to line 10,000 feet west of State House.

Street No. 1275, from Street No. 1273 to line 28,000 feet south of State House.

Street No. 1276, from Street No. 1274 to line 28,000 feet south of State House.

Grade plans of Sections (X 89, X 90 and parts of X 92 and X 93, completed); scale, $\frac{1}{1000}$.

PLAN 8.

A second hearing was held on July 2, on territory bounded approximately by Lake street, Washington street, Nonantum street and the Newton boundary line.

The location of much of the work has been in the vicinity of Chandler's pond and Strong's pond, and upon Nonantum Hill. South of Kenrick street the vital question first to be considered was the future of these ponds. Were they to be

filled or to remain open? The original intention up to date of the second hearing had been to fill these ponds, and a number of studies were made, and a system devised providing for such an end, showing streets projected directly through them; but later it was reconsidered, and other studies were made with a view to their permanency, and a provision for the location of park lands upon their borders; and the plans as filed embraced these features.

A fine boulevard, 110 feet in width, has been projected, extending from the Newton line, curving gracefully between these two ponds and over a portion of Kenrick street, widened here to about 120 feet, and thence around the base of Nonantum Hill into Lake street, widened to the width of 90 feet, making an ample connection with Rogers park and thence to Washington street. From the junction of Lake street and Commonwealth avenue, another boulevard, of nearly equal width, has been projected to intersect the above described boulevard at the Newton line, where they merge into one. Assurance is given that the residents of the latter city will continue its projection within that city.

Large reservations have been left around Chandler's pond, and around such portion of Strong's pond as lies within the limits of the city of Boston, which are ample for the purposes of parks and playgrounds, and which, when improved, will add materially to the beauty and desirability of the locality. Between the ponds and the boulevards have been located a number of streets so placed at proper distances apart and so adapted to the natural features, with their graceful lines and curves, and with their easy grades, as to make them highly desirable for residential purposes.

Immediately north of Kenrick street, and between it and Washington street, abruptly rises Nonantum Hill, to a height of nearly 200 feet above the sea level, a statement which will convey some idea of the view which it commands. Although little has been done in the filing of plans covering this hill, a vast amount of preliminary work has been done, and a system settled upon, which it is trusted will be satisfactory.

Nothing practicable could of course be done with a rectangular system upon a surface of this character; the only feasible manner being to follow its contours, which has been done with 40-foot streets at distances of about 200 feet apart, permitting fairly easy grades. At a distance of about 200 feet from Washington street, on the north side of the hill, one street, 40 feet wide, has been carried from a point on Lake street, opposite the southeasterly corner of Rogers park,

in nearly a parallel manner with Washington street, as far as Oak square, where it turns nearly at right angles and connects with Washington street at a point opposite Bigelow street.

Kenrick street, at the Newton line, is widened to 70 feet. At this width it is continued easterly until it merges into the 120-foot boulevard, previously mentioned.

On the westerly slope of Nonantum Hill several streets 40 feet wide are projected, parallel with Crescent avenue at distances of about 200 feet apart, and are continued to the Newton line, where it is believed provisions have been made to connect with, and continue them. Plans covering these suggested improvements will probably be filed at an early date.

It is proposed to widen Lake street to 60 feet from Westbourne boulevard to Newton parkway; Tremont street, to 70 feet in width; Nonantum street, to 50 feet in width and Appleton road widened to 40 feet and extended to Newton boulevard.

Plans have also been filed of the territory lying between Foster street, Chestnut Hill avenue and Chestnut Hill avenue extension, which shows, considering the unevenness of the surface, a very satisfactory manner of developing.

Unquestionably the bulk of the work during the year was done on this plan. The plans here filed covered over 250 acres of land; for purposes of comparison it can be stated that it is an area nearly equal to one-half that of Franklin park, or about five times that of the Common. When it is considered that this area, when completed for filing, is completely ramified with streets, placed at proper distances apart, the lines carefully determined and settled so that they may be placed upon the ground one hundred years hence, if necessary, so carefully adjusted to the contour of the surface as to offer practicable gradients, it will be seen that it entails work of no small consequence, and means the employment of a large force in field, and in office for many months. The results are shown in the plans filed, a brief analysis of the system of which has been given.

The following is a statement of the work done during the year:

Plan from actual survey of two sections, O 44 and O 45; size, 9 feet by 5 feet; scale, $\frac{1}{250}$. (Complete.)

Plan from actual survey of two sections, O 46 and O 47; size, 9 feet by 5 feet; scale, $\frac{1}{250}$. (Complete.)

Plan from actual survey of three sections, O 48, O 49 and O 50; size, 13 feet by 5 feet; scale, $\frac{1}{250}$. (Complete.)

Plan from actual survey of one section, O 52; size, 5 feet by 5 feet; scale, $\frac{1}{250}$. (Complete.)

Plan from actual survey of two sections, O 53 and O 54; size, 9 feet by 5 feet; scale, $\frac{1}{250}$. (Complete.)

Plan from actual survey of two sections, O 55 and O 56; size, 9 feet by 5 feet; scale, $\frac{1}{250}$. (Complete.)

Plan from actual survey of two sections, O 68 and O 69; size, 9 feet by 5 feet; scale, $\frac{1}{250}$. (Complete.)

Plan from actual survey of two sections, O 23 and O 24; size, 9 feet by 5 feet; scale, $\frac{1}{250}$. (In progress.)

Plan from actual survey of two sections, O 27 and O 28; size, 9 feet by 5 feet; scale, $\frac{1}{250}$. (In progress.)

Plan from actual survey of two sections, O 29 and O 30; size, 9 feet by 5 feet; scale, $\frac{1}{250}$. (In progress.)

Plan from actual survey of two sections, O 31 and O 32; size, 9 feet by 5 feet; scale, $\frac{1}{250}$. (In progress.)

Plan from actual survey of two sections, O 33 and O 34; size, 9 feet by 5 feet; scale, $\frac{1}{250}$. (In progress.)

Three sectional plans of sections O 56, O 68 and O 69; size of each, 4 feet by 4 feet; scale, $\frac{1}{250}$. (Complete with grades.) These plans were approved by the Mayor, and filed January 13, 1898, with the City Engineer.

One sectional plan of Section O 46; size, 4 feet by 4 feet; scale, $\frac{1}{250}$. (Complete with grades.) This plan was approved by the Mayor, and filed January 26, 1898, with the City Engineer.

Seven sectional plans of Sections O 45, O 47, O 48, O 49, O 50, O 52 and O 53; size of each, 4 feet by 4 feet; scale, $\frac{1}{250}$. (Complete with grades.) These plans were approved by the Mayor, and filed January 31, 1898, with the City Engineer.

In this territory of about 198.47 acres covered by the above sectional plans there are comprised:

Public streets:

Number of streets	9
Length	11,115 ft. = 2.10 miles
Area	568,600 sq. ft. = 13.05 acres

New streets established, private streets adopted and public streets proposed to be widened under chapter 323 of the Acts of 1891:

Number of streets	38
Length	26,200 ft. = 4.94 miles
Area	1,220,500 sq. ft. = 28.02 acres

Totals:

Number of streets	42
Length	31,435 ft. = 5.95 miles
Area	1,789,100 sq. ft. = 41.07 acres

Percentages of area of above territory, absorbed by all streets, old and new, 23%.

Plans and profiles completed, showing grades of:

Rockland street, from Chestnut Hill avenue to street No. 1167.

Street No. 1048, from Chestnut Hill-avenue extension to Kenrick-street extension.

Kenrick street, from Westbourne boulevard to Newton line.

Street No. 1165, from Chestnut Hill avenue to Mt. Vernon street.

Street No. 1166, from Rockland street to Street No. 1169.

Street No. 1167, from Street No. 630 to Street No. 1166.

Street No. 1169, from Mt. Vernon street to Street No. 629.

Street No. 1172, from Foster street to Street No. 630.

Jackson avenue, from Chestnut Hill avenue to Rockland street.

Street No. 1175, from Street No. 1046 to Street No. 1048.

Street No. 1177, from Kenrick-street extension to Street No. 1180.

Flagg street, from Lake street to Street No. 1177.

Taylor street, from Lake street to Street No. 1177.

Street No. 1180, from Lake street to Foster street.

Street No. 1453, from Lake street to 4,000 feet south of State House.

Street No. 1458, from Westbourne boulevard to 4,000 feet south of State House.

Westbourne road, from Street No. 1466 to Newton line.

Street No. 1466, from Lake street to Newton line.

Street No. 1467, from Foster street to Street No. 1496.

Undine road, from Lake street to Newton parkway.

Appleton road, from Lake street to Newton parkway.

Westbourne boulevard, from Lake street to Newton line.

Newton parkway, from Commonwealth avenue to Newton line.

Street No. 1496, from Foster street to Kenrick-street extension.

Colwell avenue, from Chestnut Hill avenue to Street No. 629.

Grade plans of Sections O 45, O 46, O 47, O 48, O 49, O 50, O 52, O 53, O 56, O 68, O 69, completed; scale, $\frac{1}{1000}$.

Contour plans showing contours at every foot of Sections O 47, O 48, O 49, O 52, O 53 and O 68; showing terri-

tory bounded by Commonwealth avenue, Lake street, Kenrick street and the Newton line; size, 5 feet by 7 feet; scale, 40 feet to an inch. (Complete).

Contour plan showing contours at every foot, of Section O 33, O 34, O 47 and O 48; showing territory bounded by Washington street, Lake street and Kenrick street; size, 3 feet by 3 feet; scale, 40 feet to an inch. (Complete.)

In connection with the sectional and other plans enumerated above, the following work has been done:

Number of titles looked up	223
Number of conveyances copied	130
Number of plans copied from Suffolk and Norfolk Registries and elsewhere	38

PLAN 10.

No second hearing was held on this plan during the year, except on a small portion lying just east of the tracks of the West Roxbury Branch of the New York, New Haven and Hartford Railroad, and which was considered with that of Plan 11 and was held on November 12, 1897.

Besides the preliminary work done in connection with Plan 11 a large amount of detail work has been accomplished and plans were filed covering a territory of 160 acres, located in the extreme southwestern section of the city, at Germantown, extending from Grove street southerly, directly to the boundary lines of Dedham and Hyde Park. The system has previously been described, and the filing of these plans completed the work for the tract lying between Beech street, Washington street, the Dedham line and the West Roxbury Branch of the New York, New Haven and Hartford Railroad.

This entire territory of about 1,033 acres, crossed at its northeasterly extremity by the West Roxbury Parkway, has been provided with a perfect system of streets, with practicable grades, provision has been made for the proper future widenings of Washington street, Centre street, Spring street, La Grange street and many other prominent, or destined to be prominent, thoroughfares, adjusted with lines and grades, thereby obviating the delay frequently made necessary in a newly-developed territory, in the laying of water-mains, gas-pipes and in the construction of sewers.

The following is a statement of the work done during the year:

Plan from actual survey of two sections, Cc 46 and Cc 55; size, 9 feet by 5 feet; scale, $\frac{1}{250}$. (Complete.)

Plan from actual survey of two sections, Cc 47 and Cc 54 ; size, 9 feet by 5 feet ; scale, $\frac{1}{250}$. (Complete.)

Plan from actual survey of two sections, Cc 66 and Cc 75 ; size, 9 feet by 5 feet ; scale, $\frac{1}{250}$. (Complete.)

Plan from actual survey of one section, Cc 67 ; size, 5 feet by 5 feet ; scale, $\frac{1}{250}$. (Complete.)

Plan from actual survey of two sections, Cc 8 and Cc 13 ; size, 9 feet by 5 feet ; scale, $\frac{1}{250}$. (In progress.)

One sectional plan of Section Cc 67 ; size, 4 feet by 4 feet ; scale, $\frac{1}{250}$. (Complete with grades.) This plan was approved by the Mayor, and filed, September 8, 1897, with the City Engineer.

Four sectional plans of Sections Cc 46, Cc 47, Cc 54 and Cc 75 ; size of each, 4 feet by 4 feet ; scale, $\frac{1}{250}$. (Complete with grades.) These plans were approved by the Mayor, and filed October 5, 1897, with the City Engineer.

Two sectional plans of Sections Cc 55 and Cc 66 ; size of each, 4 feet by 4 feet ; scale, $\frac{1}{250}$. (Complete with grades.) These plans were approved by the Mayor, and filed January 13, 1898, with the City Engineer.

In this territory of about 141.13 acres covered by the above plan there are comprised :

Public streets :

Number of streets	6
Length	12,180 ft.= 2.31 miles
Area	548,050 sq. ft.=12.58 acres

New streets established, private streets adopted and public streets proposed to be widened under chapter 323 of the Acts of 1891 :

Number of streets	24
Length	26,060 ft.= 4.94 miles
Area	919,200 sq. ft.=21.10 acres

Totals :

Number of streets	26
Length	29,700 ft.= 5.63 miles
Area	1,467,250 sq. ft.=33.68 acres

Percentage of area of above territory absorbed by all streets, old and new, 24.%

Plans and profiles completed, showing grades of :

Hart street, from Prospect street to Cass street.

Stimson street, from Washington street to Centre street.

Street No. 605, from Grove street to street No. 751.

Grove street, from Washington street to Dedham line.

Street No. 627, from Grove street to street No. 1445.

Rockland street, from Stimson street to Dedham line.

Street No. 744, from Washington street to 34,000 feet south of State House.

Street No. 745, from Washington street to 34,000 feet south of State House.

Street No. 746, from Washington street to Grove street.

Street No. 754, from Washington street to Rockland street.

Street No. 1298, from Stimson street to street No. 1445.

Street No. 1307, from Centre street to Dedham line.

Street No. 1310, from Street No. 1312 to Dedham line.

Street No. 1311, from Street No. 1312 to Dedham line.

Street No. 1313, from Rockland street to Street No. 754.

Street No. 1314, from Centre street to Street No. 1313.

Street No. 1316, from Rockland street to Dedham line.

Street No. 1317, from Washington street to Grove street.

Street No. 1322, from Stimson street to Street No. 1445.

Street No. 1323, from Grove street to Dedham line.

Street No. 1324, from Grove street to Street No. 1323.

Street No. 1327, from Rockland street to German street.

Street No. 1445, from Centre street to Washington street.

Street No. 1446, from Street No. 1445 to Dedham line.

Street No. 1447, from Rockland street to German street.

Grade plan of Sections Cc 46, Cc 47, Cc 54, Cc 55, Cc 66, Cc 67 and Cc 75, completed; scale, $\frac{1}{1000}$.

Contour plan showing contours at every foot, of Sections Cc 8, Cc 9, Cc 11, Cc 12, Cc 29, Cc 30, Cc 31, Cc 32 and Cc 49; showing territory bounded by Spring street, Cypress street, Baker street, West Roxbury Branch Railroad, and the Dedham line; size, 5 ft. by 7 ft.; scale, 40 ft. to an inch. (Completed).

Contour plan showing contours at every foot, of Sections Cc 53, Cc 54, Cc 67 and Cc 68; showing territory bounded by Centre street, Stimson street, Washington street and the Dedham line; size, 3 feet by 5 feet; scale, 40 feet to an inch. (Completed.)

In connection with the sectional and other plans enumerated above, the following work has been done :

Number of titles looked up . . .	163
Number of conveyances copied . . .	16

PLAN 11.

A second hearing was held on November 12, on territory bounded approximately by the West Roxbury Branch of the New York, New Haven and Hartford Railroad, Spring street, Baker street, Gardner street, Adams street, Farragut street, Baker street, Weld street, La Grange street, Vermont street and Corey street.

Of the system displayed at this hearing, that portion lying between Corey street and Baker street, and from the railroad, northwesterly, was shown, treated with the introduction of a few 40-foot streets to sub-divide some of the larger blocks of land, longitudinally, as well as laterally. Other than this, very few radical changes are here proposed.

North of Mt. Vernon street and Vermont street the right of way of the Brookline Water Works will be utilized for a trunk street, from which will diverge a number of streets, 200 feet apart.

La Grange street is to be widened to 80 feet as far as the Newton line, as will Baker street also.

A large amount of preliminary work was done during the year over the entire territory, and considerable work in detail was accomplished to the west of Baker street, between it and Cow Island, warranted by the apparent activity in real estate matters in that vicinity; and a system was devised for a tract of land containing about 100 acres, wholly undeveloped and entirely devoid of streets. The system shown appears to be satisfactory to the interested owners and a number of the plans have been filed. The principal features, of which are streets 200 feet apart, departing from Baker street at nearly right angles, and continuing parallel with the tracks of the railroad, belonging to the Highland Ice Company, to connect with a 40-foot street, made 200 feet from, and parallel with the location of the Brookline Water Works which is here, again made the location for a future street. Amesbury street is shown to be extended and connects with East street.

The following is a statement of the work done during the year:

Plan from actual survey of two sections, Z 72 and Z 89: size, 9 feet by 5 feet; scale, $\frac{1}{250}$. (Complete.)

Plan from actual survey of one section, Z 73; size, 5 feet by 5 feet; scale, $\frac{1}{250}$. (Complete.)

Plan from actual survey of two sections, Z 88 and Z 93: size, 9 feet by 5 feet; scale, $\frac{1}{250}$. (Complete.)

Plan from actual survey of one section, Z 90; size, 5 feet by 5 feet; scale, $\frac{1}{250}$. (Complete.)

Plan from actual survey of one section, Z 71 ; size, 5 feet by 5 feet ; scale, $\frac{1}{250}$. (In progress.)

Plan from actual survey of one section, Z 68 ; size, 5 feet by 5 feet ; scale, $\frac{1}{250}$. (In progress.)

One sectional plan of Section Z 73 ; size, 4 feet by 4 feet ; scale, $\frac{1}{250}$. (Complete with grades.) This plan was approved by the Mayor, and filed January 26, 1898, with the City Engineer.

Five sectional plans of Sections Z 72, Z 88, Z 89, Z 90 and Z 93 ; size of each, 4 feet by 4 feet ; scale, $\frac{1}{250}$. (Complete with grades.) These plans were approved by the Mayor, and filed January 31, 1898, with the City Engineer.

In this territory of about 137.76 acres covered by the above plans there are comprised :

Public streets :

Number of streets	.	.	.	.	.	6
Length	.	.	.	6,400 ft.	=	1.21 miles
Area	.	.	.	250,200 sq. ft.	=	5.75 acres

New streets established, private streets adopted and public streets proposed to be widened under chapter 323 of the Acts of 1891 :

Number of streets	.	.	.	.	.	37
Length	.	.	.	30,200 ft.	=	5.72 miles
Area	.	.	.	1,224,200 sq. ft.	=	28.10 acres

Totals :

Number of streets	.	.	.	.	.	41
Length	.	.	.	32,460 ft.	=	6.14 miles
Area	.	.	.	1,474,400 sq. ft.	=	33.85 acres

Percentage of area of above territory absorbed by all streets, old and new, 24.5 %.

Plans and profiles completed showing grades of :

Baker street, from Spring street to Highland Ice Company's Railroad.

Street No. 768, from Baker street to Street No. 766.

Amesbury street, from Baker street to Rangeley street.

Dent street, from Ivory street to Mt. Vernon street.

Rangeley street, from Gardner street to Salisbury street.

Whidden street, from Ashumet street to Street No. 1543.

Ashumet street, from Baker street to Gardner street.

Hampton street, from Salisbury street to Whidden street.

Baker place, from Baker street to Salisbury street.

Street No. 1544, from Amesbury street to Baker place.

Street No. 1545, from Amesbury street to Baker place.
 Sumpter street, from Baker street to Whidden street.
 Welden street, from Ashumet street to Street No. 1549.
 Bonner street, from Baker street to Ashumet street.
 Street No. 1549, from Marshall street to Street No. 1566.
 Street No. 1551, from Salisbury street to Gardner street.
 Street No. 1566, from Baker street to Street No. 767.
 Street No. 1567, from Dent street to southwest of Marshall street.

Marshall street, from Spring street to Street No. 1567.
 Springville avenue, from Spring street to Street No. 1549.
 Street No. 1572, from Gardner street to Street No. 768.
 Winslow street, from Dent street to Street No. 766.

Grade plan of Sections Z 72, Z 73, Z 88, Z 89, Z 90, Z 93, and parts of Z 71 and Z 74, completed; scale, $\frac{1}{1000}$.

Contour plan showing contours at every foot of Sections Z 50, Z 51 and Z 70; showing territory west of Baker street near Mt. Vernon street; size, 5 feet by 6 feet; scale, 40 feet to an inch. (Complete.)

In connection with the sectional and other plans enumerated above, the following work has been done:

Number of titles looked up	.	.	.	205
Number of conveyances copied	.	.	.	97
Number of plans copied from Suffolk and Norfolk Registries and elsewhere	.	.	.	1

PLAN 12.

A second hearing was held on July 19, on territory bounded approximately by Walk Hill street, Paine street, Canterbury street, Neponset avenue, and the New York, New Haven and Hartford Railroad.

Stony brook crosses diagonally the southeasterly half of this territory.

Within the above-described limits are located several large holdings of undeveloped, or partially developed land, among which may be mentioned that of the estate of the heirs of William Minot, containing about 27 acres; of Andrew J. Peters, containing about 25 acres; of Jacob Seaver, containing about 13 acres; of Moses Williams, containing about 19 acres; the Whittemore estate, containing about 12 acres; the estate of Joseph H. Rowe, containing about 6 acres, and many others. The Peters estate is already in an advanced state of development upon lines exhibited at this hearing, many of the streets being complete in construction.

The principal thoroughfares as shown at this hearing are provided with liberal widenings. Walk Hill street is to be

made 80 feet, the widening to be on the side adjoining the New York, New Haven and Hartford Railroad, from Washington street to Neponset avenue; thence on either side about equally; Canterbury street to be widened to 80 feet; Paine street to 40 feet; Bourne street to 40 feet; and Florence street to 40 feet.

The preliminary field work has been nearly completed in this territory, and a force is actively engaged in completing the work in detail.

A second hearing was held on November 26, on the territory lying partly in this plan and partly in Plan 6, bounded approximately by Oakland street, Blue Hill avenue, the Neponset river and the Hyde Park boundary line. This hearing was given to cover the balance of a territory lying between Blue Hill avenue, the Hyde Park line, Harvard street, and Walk Hill street, the whole of which, on account of its size, not having been taken in at the previous hearings. The system for this territory has been described in a previous report, the principal features of which, however, are three thoroughfares, 60 feet wide; one projected from the junction of Walk Hill street and Harvard street, in a direct line to the junction of Oakland street and Harvard street; from this junction another departs diagonally across the territory by a symmetrical combination of two sweeping curves and a long straight line to unite with Almont street and through it widened to 60 feet to Blue Hill avenue. The third large avenue is Tileston avenue, widened to 60 feet, and extended to and across Oakland street and through Regent road widened to the Hyde Park line. The proper number of intermediate and intersecting streets has been allowed; a widening of Oakland street to 80 feet has been provided for. Lying immediately south of Oakland street is the settlement called Rugby, whose streets previously privately projected, have been, with a few slight modifications, embraced in this system.

As stated under Plan 6, plans showing the greater part of this entire district have been filed. Other sections were filed showing a portion of the work done jointly with Plan 13, in territory contiguous to Pierce Farm, Forest Hills Cemetery and Franklin park; and several more were filed covering Wellington Hill entire, as well as the slopes south and west, with a system which is satisfactory to all directly interested.

The following is a statement of the work done during the year:

Plan from actual survey of one section, X 31; size, 5 feet by 5 feet; scale, $\frac{1}{2\frac{1}{2}''}$. (Complete.)

Plan from actual survey of one section, X 32 ; size, 5 feet by 5 feet ; scale, $\frac{1}{250}$. (Complete.)

Plan from actual survey of one section, Y 40 ; size, 5 feet by 5 feet ; scale, $\frac{1}{250}$. (Complete.)

Plan from actual survey of two sections, X 69 and X 72 ; size, 9 feet by 5 feet ; scale, $\frac{1}{250}$. (Complete.)

Plan from actual survey of two sections, X 70 and X 71 ; size, 9 feet by 5 feet ; scale, $\frac{1}{250}$. (Complete.)

Plan from actual survey of one section, X 89 ; size, 5 feet by 5 feet ; scale, $\frac{1}{250}$. (Complete.)

Plan from actual survey of two sections, Y 81 and Y 82 ; size, 9 feet by 5 feet ; scale, $\frac{1}{250}$. (Complete.)

Plan from actual survey of three sections, Y 98, Y 99 and Y 100 ; size, 13 feet by 5 feet ; scale, $\frac{1}{250}$. (Complete.)

Plan from actual survey of two sections, Dd 1 and Dd 2 ; size, 9 feet by 5 feet ; scale, $\frac{1}{250}$. (Complete.)

Plan from actual survey of three sections, Dd 18, Dd 19 and Dd 20 ; size, 13 feet by 5 feet ; scale, $\frac{1}{250}$. (Complete.)

Plan from actual survey of two sections, Dd 21 and Dd 22 ; size, 9 feet by 5 feet ; scale, $\frac{1}{250}$. (Complete.)

Plan from actual survey of one section, Dd 40 ; size, 5 feet by 5 feet ; scale, $\frac{1}{250}$. (Complete.)

Plan from actual survey of one section, Dd 3 ; size, 5 feet by 5 feet ; scale, $\frac{1}{250}$. (In progress.)

Seven sectional plans of Sections X 31, X 32, X 71, X 72, Y 40, Y 100 and Dd 2 ; size of each, 4 feet by 4 feet ; scale, $\frac{1}{250}$. (Complete with grades.) These plans were approved by the Mayor, and filed September 8, 1897, with the City Engineer.

One sectional plan of Section Dd 18 ; size, 4 feet by 4 feet ; scale, $\frac{1}{250}$. (Complete with grades.) This plan was approved by the Mayor, and filed October 5, 1897, with the City Engineer.

One sectional plan of Section Dd 19 ; size, 4 feet by 4 feet ; scale, $\frac{1}{250}$. (Complete with grades.) This plan was approved by the Mayor, and filed January 13, 1898, with the City Engineer.

One sectional plan of Section Dd 20 ; size, 4 feet by 4 feet ; scale, $\frac{1}{250}$. (Complete with grades.) This plan was approved by the Mayor, and filed January 26, 1898, with the City Engineer.

Three sectional plans of Sections Dd 1, Dd 21 and Dd 40 ; size of each, 4 feet by 4 feet ; scale, $\frac{1}{250}$. (Complete with grades.) These plans were approved by the Mayor, and filed January 31, 1898, with the City Engineer.

In this territory of about 261.88 acres covered by the above sectional plans there are comprised :

Public streets:

Number of streets	.	.	.	.	.	5
Length	.	.	.	.	8,300 ft.	= 1.58 miles
Area	.	.	.	.	333,500 sq. ft.	= 7.66 acres

New streets established, private streets adopted and public streets proposed to be widened, under chapter 323 of the Acts of 1891:

Number of streets	.	.	.	.	.	61
Length	.	.	.	.	47,640 ft.	= 9.02 miles
Area	.	.	.	.	1,879,300 sq. ft.	= 43.14 acres

Totals:

Number of streets	.	.	.	.	.	62
Length	.	.	.	.	47,940 ft.	= 9.08 miles
Area	.	.	.	.	2,212,800 sq. ft.	= 50.79 acres

Percentage of area of above territory absorbed by all streets, old and new, 21.5 %.

Plan of territory showing sections Y 81, Y 82, Y 98, Y 99, Y 100, Dd 1, Dd 2, Dd 3, Dd 18, Dd 19, Dd 20; size, 5 feet by 6 feet; scale, $\frac{1}{10000}$. (In progress.)

Plan of territory showing sections Dd 21, Dd 22, Dd 39, Dd 40, Dd 41, Dd 42; size, 5 feet by 6 feet; scale, $\frac{1}{10000}$. (Completed.)

Plans and profiles completed showing grades of:

Oakland street, from Harvard street to New England Railroad.

Hollingsworth street, from Randolph road to Hyde Park line.

Street No. 905, from street No. 1153 to 10,000 feet west of State House.

Canterbury street, from Morton street to Austin street.

Duke street, from Ponemah street to Ormond street.

Tileston avenue, from Walk Hill street to 28,000 feet south of State House.

Street 978, from Street No. 916 to street No. 916.

Ormond street, from Street No. 1092 to 28,000 feet south of State House.

Ponemah street, from Street No. 916 to 28,000 feet south of State House.

Street No. 1055, from Tileston avenue to Street No. 978.

Street No. 1093, from Tileston avenue to Street No. 1080.

Street No. 1156, from Street No. 1154 to Street No. 1155.

Street No. 1157, from Canterbury street to Street No. 1154.

- Mt. Hope avenue, from Oakland street to Street No. 1271.
- Street No. 1263, from Oakland street to Street No. 1290.
- Street No. 1267, from Oakland street to 10,000 feet west of State House.
- Street No. 1269, from Oakland street to Almont street.
- Tileston avenue, from Oakland street to Messinger street.
- Street No. 1271, from Oakland street to Almont street.
- Street No. 1272, from Almont street to Mattapan street.
- Street No. 1273, from Oakland street to Mattapan street.
- Street No. 1274, from 10,000 feet west of State House to Hyde Park line.
- Street No. 1275, from Walk Hill street to 28,000 feet south of State House.
- Street No. 1276, from Street No. 1265 to 28,000 feet south of State House.
- Street No. 1278, from Street No. 1277 to Hyde Park line.
- Street No. 1279, from Oakland street to Almont street.
- Street No. 1284, from Street No. 1263 to Street No. 1278.
- Street No. 1291, from Almont street to Street No. 1273.
- Messinger street, from Favre street to Street No. 1269.
- Randolph road, from Oakland street to River street.
- Ridge road, from Randolph road to Hyde Park line.
- Street No. 1651, from Oakland street to Randolph road.
- Street No. 1655, from Oakland street to Hyde Park line.
- Rock road, from Randolph road to Hyde Park line.
- Radcliff road, from Randolph road to Hyde Park line.
- Roseberry road, from Randolph road to Hyde Park line.
- Ransom road, from Randolph road to Hyde Park line.
- Regent road, from Randolph road to Hyde Park line.
- Grade plan of Sections X 31, X 32, X 71 and X 72, completed; scale, $\frac{1}{1000}$.
- Grade plan of Sections Y 40, Y 100, completed; scale, $\frac{1}{1000}$.
- Grade plan of Sections Dd 1, Dd 2, Dd 18, Dd 19, Dd 20, Dd 21, Dd 22, Dd 40, completed; scale, $\frac{1}{1000}$.
- Contour plan, showing contours at every foot, of Sections Y 43, Y 44, Y 45, Y 56, Y 57, Y 58, Y 59, Y 62, Y 63 and Y 64; size, 5 feet by 7 feet; scale, 40 feet to an inch. (In progress.)

In connection with the sectional and other plans enumerated above, the following work has been done :

Number of titles looked up	417
Number of conveyances copied	417
Number of plans copied from Suffolk and Norfolk Registries and elsewhere	48

PLAN 13.

A second hearing was held on July 16, 1897, on territory bounded approximately by Perkins street, Jamaica way, Pond street and Centre street.

During the year a large amount of preliminary work had been done and numerous studies had been made for the treatment of this territory, and one finally adopted which was shown at the above hearing.

Some little dissatisfaction to a portion of the system having been expressed at that time, and since, a number of informal hearings were given to these remonstrants, and the consideration of their petition being now pending, the work in detail upon a large portion of this territory has been much retarded.

It is hoped a satisfactory adjustment of the differences will be made soon and enable rapid progress for the finished work during the coming year.

Plans showing completed work were filed for a portion of the territory lying between Heath street, Day street, Perkins street, Catalpa street and South Huntington avenue. These plans provide for an extension of Minden street to Cranford street, and thence through Floyd street to South Huntington avenue. From this, Minden-street extension, depart several streets at about 200 feet apart, connecting with Heath street. Two hundred feet from, and parallel with Cranford street, a 40-foot street is located from Heath street to Bynner street, the latter being shown as extended to Creighton street.

It is proposed to extend Catalpa street to Centre street in nearly a direct line from Perkins street. Perkins street is shown widened to 50 feet, Centre street to 80 feet, and Heath street it is proposed to widen to 70 feet from Huntington avenue to Highland Spring square. It is hoped the coming year will see many of the plans which embrace this work filed.

The following is a statement of the work done during the year :

Plan from actual survey of two sections, S 18 and S 23 ; size, 9 feet by 5 feet ; scale, $\frac{1}{250}$. (Complete.)

Plan from actual survey of one section, S 19; size, 5 feet by 5 feet; scale, $\frac{1}{250}$. (In progress.)

Plan from actual survey of two sections, S 36 and S 45; size, 9 feet by 5 feet; scale, $\frac{1}{250}$. (In progress.)

Plan from actual survey of two sections, S 24 and S 37; size, 9 feet by 5 feet; scale, $\frac{1}{250}$. (In progress.)

One sectional plan of Section S 18; size, 4 feet by 4 feet; scale, $\frac{1}{250}$. (Complete with grades.) This plan was approved by the Mayor, and filed September 8, 1897, with the City Engineer.

One sectional plan of Section S 23; size, 4 feet by 4 feet; scale, $\frac{1}{250}$. (Complete with grades.) This plan was approved by the Mayor, and filed October 5, 1897, with the City Engineer.

In this territory of about 45.92 acres covered by the above sectional plans there are comprised:

Public streets:

Number of streets	.	.	.	.	.	6
Length	.	.	.	2,610 ft.	=	0.49 miles
Area	.	.	.	107,000 sq. ft.	=	2.46 acres

New streets established, private streets adopted and public streets proposed to be widened under chapter 323 of the Acts of 1891:

Number of streets	.	.	.	.	.	15
Length	.	.	.	8,390 ft.	=	1.59 miles
Area	.	.	.	334,200 sq. ft.	=	7.67 acres

Totals:

Number of streets	.	.	.	.	.	20
Length	.	.	.	10,600 ft.	=	2.00 miles
Area	.	.	.	441,200 sq. ft.	=	10.13 acres

Percentage of area of above territory absorbed by all streets, old and new, 22%.

Plan of territory showing Sections S 2, S 3, S 4, S 16, S 17, S 18, S 19, S 22, S 23, S 24, S 25, S 37, S 38, S 44, S 45, S 56 and S 57; size, 8 feet by 5 feet; scale, $\frac{1}{1000}$. (In progress).

Plans and profiles completed, showing grades of:

Day street, from Perkins street to Heath street.

Street No. 1095, from South Huntington avenue to

Day street.

Street No. 1097, from Kenney street to Heath street.

Cranford street, from Bynner street to Heath street.

Kenney street, from Day street to Cranford street.

Bynner street, from Day street to Creighton street.

Mark street, from Centre street to Day street.

Grade plans of sections S 18 and S 23, completed ;
scale, $\frac{1}{10000}$.

Contour plan, showing contours at every foot, of Sections X 27, X 28, X 33 and X 34; showing territory bounded by Blue Hill avenue, Angell street, Canterbury street, Austin street and Harvard street; size, 5 feet by 8 feet; scale, 40 feet to an inch. (Complete).

In connection with the sectional and other plans enumerated above, the following work has been done :

Number of titles looked up	250
Number of conveyances copied	241
Number of plans copied from Suffolk and Norfolk Registries and elsewhere	23

SUMMARY OF WORK DURING THE YEAR.

Sectional plans completed, approved and filed during the year; — 43 sections, O 45, O 46, O 47, O 48, O 49, O 50, O 52, O 53, O 56, O 68, O 69, S 18, S 23, X 31, X 32, X 55, X 66, X 71, X 72, X 89, X 90, Y 40, Y 100, Z 72, Z 73, Z 88, Z 89, Z 90, Z 93, Ce 46, Ce 47, Ce 54, Ce 55, Ce 66, Ce 67, Ce 75, Dd 1, Dd 2, Dd 18, Dd 19, Dd 20, Dd 21 and Dd 40.

Territory covered by above plans 877 acres

Public streets :

Number of streets	36
Length	45,495 ft. = 8.89 miles
Area	1,924,410 sq. ft. = 44.19 acres

New streets established, private streets adopted and public streets proposed to be widened under chapter 323 of the Acts of 1891 :

Number of streets	201
Length	155,470 ft. = 29.42 miles
Area	6,236,900 sq. ft. = 143.18 acres

Totals :

Number of streets	220
Length	170,805 ft. = 32.33 miles
Area	8,161,510 sq. ft. = 187.36 acres

Percentage of area of above territory absorbed by all streets, old and new, 21.36%.

Plans from actual survey completed :

Number	30
Number of sections comprised	53
Area of sections comprised	1,110.53 acres
Scale	$\frac{1}{250}$

Plans from actual survey in progress :

Number	19
Number of sections comprised	36
Area of sections comprised	789.33
Scale	$\frac{1}{250}$

Plans from actual survey in progress, of territory :

Number	6
Number of sections comprised	56
Area of sections comprised	1158.36 acres
Scale	$\frac{1}{1000}$

Plans and profiles showing grades completed :

Number of streets	138
Scale	$\frac{1}{250}$ and $\frac{1}{50}$

Plans showing contours at every one foot completed :

Number of plans	6
Number of sections comprised	30
Area of section comprised	619.58 acres
Scale	.40 feet to an inch

Plans showing contours at every one foot in progress :

Number of plans	1
Number of sections comprised	10
Area of sections comprised	229.60 acres
Scale	.40 feet to an inch

In connection with the sectional and other plans enumerated above, completed and in progress, the following work has been done :

Number of titles looked up	2,633
Number of conveyances copied	1,990
Number of plans copied from Suffolk Registry and elsewhere	207

Summary of all surveying work done under chapter 323 of the Acts of 1891, and amendments thereto, to February 1, 1898 :

Preliminary plans completed :

Number	14
Numbers, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 and 14	
Area	20,621 acres

Sizes, 11 ft. 6 in. by 8 ft. 9 in.; 12 ft. 3 in. by 5 ft.; 14 ft. by 10 ft.; 16 ft. 6 in. by 10 ft.; 10 ft. by 8 ft.; 9 ft. by 5 ft.; 11 ft. by 10 ft.; 20 ft. by 10 ft.; 8 ft. 6 in. by 7 ft.; 17 ft. by 10 ft.; 20 ft. by 10 ft.; 18 ft. by 10 ft.; 15 ft. 6 in. by 10 ft.; and 16 ft. 6 in. by 10 ft.; scale, 50 ft. to an inch, and $\frac{1}{1000}$.

Public streets:

Number of streets	.	.	.	.	.	.	811
Length	.	.	.	.	.	1,167,631 ft. = 221.14 miles	

Private streets:

Number of streets	.	.	.	.	.	1,012
Length	.	.	.	.	501,401 ft. = 94.96 miles	

Estates:

Number of estates	.	.	.	.	.	22,094
-------------------	---	---	---	---	---	--------

Working plans completed:

Number	.	.	.	.	.	1
Size	.	.	.	.	16 ft. by 7 ft.	
Scale	.	.	.	.	50 ft. to an inch	

Plans from actual survey completed:

Number	.	.	.	.	.	169
Number of sections	.	.	.	.	.	363
Area of sections comprised	.	.	.	6,994.73 acres		
Scale	.	.	.	.	$\frac{1}{250}$	

Plans from actual survey, completed, of territory:

Number	.	.	.	.	.	4
Number of sections comprised	.	.	.	.	.	57
Area of sections comprised	.	.	.	1,047.25 acres		
Scale	.	.	.	.	$\frac{1}{1000}$	

Plans from actual survey in progress:

Number	.	.	.	.	.	19
Number of sections comprised	.	.	.	.	.	36
Area of sections comprised	.	.	.	789.33 acres		
Scale	.	.	.	.	$\frac{1}{250}$	

Plans from actual survey in progress, of territory:

Number	.	.	.	.	.	6
Number of sections comprised	.	.	.	.	.	56
Area of sections comprised	.	.	.	1,158.36 acres		
Scale	.	.	.	.	$\frac{1}{1000}$	

Sectional plans completed, approved and filed:

Number of plans	.	.	.	.	.	345
Size of each	.	.	.	.	4 ft. by 4 ft.	
Scale	.	.	.	.	$\frac{1}{250}$	

Territory covered by plans :

Area 6,765.87 acres

Public streets :

Number of streets 249

Length 392,185 ft. = 74.27 miles

Area 21,847,402 sq. ft. = 501.54 acres

New streets established, private streets adopted and public streets proposed to be widened under chapter 323 of the Acts of 1891 :

Number of streets 1,089

Length 1,005,479 ft. = 190.43 miles

Area 42,381,323 sq. ft. = 972.94 acres

Totals :

Number of streets 1,200

Length 1,257,442 ft. = 238.15 miles

Area 64,228,725 sq. ft. = 1,474.48 acres

Percentage of area of above territory absorbed by all streets, old and new, 22%.

Sectional plans completed, ready to file :

Number of plans 1

Size 4 ft. by 4 ft.

Scale $\frac{1}{250}$

Territory covered by plan :

Area 5.24 acres

Public streets :

Number of streets 1

Length 246 ft. = 0.04 mile

Area 39,360 sq. ft. = 0.90 acres

New streets established, private streets adopted and public streets proposed to be widened under chapter 323 of the Acts of 1891 :

Number of streets 3

Length 932 ft. = 0.18 miles

Area 37,008 sq. ft. = 0.85 acres

Totals of sectional plans filed and ready to file :

Number of plans 346

Size of each 4 ft. by 4 ft.

Scale $\frac{1}{250}$

Territory covered by plans :

Area 6,771.11 acres

Public streets :

Number of streets	.	.	.	.	.	250
Length	.	.	.	.	392,431 ft.	= 74.31 miles
Area	.	.	.	.	21,886,762 sq. ft.	= 502.44 acres

New streets established, private streets adopted and public streets proposed to be widened under chapter 323 of the Acts of 1891:

Number of streets	.	.	.	.	.	1,092
Length	.	.	.	.	1,006,411 ft.	= 190.61 miles
Area	.	.	.	.	42,418,331 sq. ft.	= 973.79 acres

Totals :

Number of streets	.	.	.	.	.	1,203
Length	.	.	.	.	1,258,620 ft.	= 238.37 miles
Area	.	.	.	.	64,305,093 sq. ft.	= 1,476.24 acres

Percentage of area of above territory, exclusive of parks, rivers, etc., absorbed by all streets, old and new, 22 %.

Streets located and relocated on sectional plans completed, approved and filed:

Length	.	.	.	.	1,257,442 ft.	= 238.15 miles
--------	---	---	---	---	---------------	----------------

Streets located and relocated on sectional plans completed, ready to file:

Length	.	.	.	.	1,178 ft.	= 0.22 mile
--------	---	---	---	---	-----------	-------------

Index plans completed:

Number of plans	.	.	.	.	.	2
Size	.	.	.	.	.	4 ft. by 4 ft.
Scales	.	.	.	.	.	$\frac{1}{1000}$ and $\frac{1}{1500}$

Grade plans of whole territories completed:

Number of plans	.	.	.	.	.	2
Number of sections comprised	.	.	.	.	.	25
Area of sections comprised	.	.	.	.	.	237.75 acres
Scale	.	.	.	.	.	$\frac{1}{1000}$

Grade plans showing sections :

Number of plans	.	.	.	.	.	17
Number of sections completed	.	.	.	.	.	349
Area of sections completed	.	.	.	.	.	6,805.20 acres
Scale	.	.	.	.	.	$\frac{1}{1500}$

Plans showing contours at every 5 feet, completed:

Number of plans	.	.	.	.	.	4
Number of sections comprised	.	.	.	.	.	49
Area of sections comprised	.	.	.	.	.	1,027.33 acres
Scale	.	.	.	.	.	$\frac{1}{1000}$

Tracings showing contours at every 5 feet, completed:

Number of tracings	2
Number of sections comprised	19
Area of sections comprised	385.33 acres
Scale	$\frac{1}{1000}$

Plans showing contours at every foot, completed:

Number of plans	8
Number of sections comprised	38
Area of sections comprised	769.21 acres
Scale	$\frac{1}{250}$

Plans showing contours at every foot, completed:

Number of plans	1
Number of sections comprised	1
Area of sections comprised	22.96 acres
Scale	20 ft. to an inch

Plans showing contours at every foot, completed:

Number of plans	24
Number of sections comprised	137
Area of sections comprised	2,601.58 acres
Scale	40 ft. to an inch

Plans showing contours at every foot, in progress:

Number of plans	5
Number of sections comprised	36
Area of sections comprised	737.69 acres
Scale	40 ft. to an inch

Plans showing contours at every 2 feet, completed:

Number of plans	1
Number of sections comprised	3
Area of sections comprised	68.87 acres
Scale	40 ft. to an inch

Conveyances copied and titles looked up:

Number	15,375
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Plans copied from Suffolk and Norfolk Registries:

Number	3,079
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Stone monuments set in districts covered by Plans 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12 and 13, for use in determination of position and location of street lines:

Number of monuments	262
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Miscellaneous work includes tracings, estimates of areas by calculations, planimeter, etc., sketches and studies of different plats, copies of city's notes for use in the field, etc.

LIST OF PLANS.

SURVEYING DIVISION, IN STREET LAYING-OUT DEPARTMENT,
JANUARY 31, 1898.

ROOMS 23 TO 27 INCLUSIVE, OLD COURT-HOUSE.

Indexed.	Classification.	Number. of Plans.
On Wall, Room 27 .	Preliminary Plan 1 Back Bay Fens.....	1
" " " 24 .	" " 2 Back Bay.....	1
" " " 27 .	" " 3 Neponset.....	1
" Frame " 27 .	" " 4 Back Bay	1
" Wall " 27 .	" " 5 Central Dorchester	1
" Frame " 26 .	" " 6 Lower Mills and Mattapan..	1
" " " 26 .	" " 7 South Bay.....	1
" " " 25 .	" " 8 Brighton.....	1
" Wall " 27 .	" " 9 Part of Roxbury.....	1
" Frame " 27 .	" " 10 Part of West Roxbury.....	1
" " " 25 .	" " 11 " " " "	1
" " " 27 .	" " 12 " " " "	1
" " " 27 .	" " 13 " " Roxbury and West Roxbury	1
" Wall " 25 .	" " 14 Grove Hall and Meeting- House Hill.....	1
Vol. A.....	Miscellaneous plans of estates. Plans 1 and 2 .	179
Vol. B.....	" " " " " 3 " 5 .	310
Vol. C.....	" " " " " 4, 9 and 8	585
Vol. D.....	" " " " " 10	146
Vol. E.....	" " " " " 12, 13 and 14	570
Vol. F.....	" " " " " 12, 13 and 14	110
Vol. G.....	" " " " " 5, 6 and 12	282
Vol. H.....	" " " " " 8.....	107
Vol. I.....	" " " " " 13.....	94
Vol. J.....	" " " " " 6 and 12..	42
Vol. L.....	Deed Tracings.....	40
Vol. II.....	" "	206
Vol. III.....	" "	63
Vol. IV.....	" "	28
Vol. V.....	" "	10
Vol. VI.....	" "	19
Case A.....	Miscellaneous plans, studies, etc.	30
<i>Carried forward ..</i>	.....	2,835

LIST OF PLANS. — *Continued.*

Indexed.	Classification.	Number of Plans.
<i>Brought forward ..</i>	.....	2,835
Case E	Plans of streets approved by Street Commis- sioners in Roxbury	46
“ “	Plans of streets approved by Street Commis- sioners in Dorchester	113
“ “	Plans of streets approved by Street Commis- sioners in West Roxbury	61
“ “	Plans of streets approved by Street Commis- sioners in Brighton	34
“ “	Plans of streets approved by Street Commis- sioners in Charlestown	1
“ “	Plans of streets approved by Street Commis- sioners in City Proper	2
“ “	Plans of streets approved by Street Commis- sioners in South Boston	2
“ “	Plans of streets approved by Street Commis- sioners in East Boston	10
Case DD	Miscellaneous plans, estates, etc.	48
Case EE	Miscellaneous deed plans, South Bay	35
<i>Plans from Actual Survey.</i>		
Sections. Sections. Sections.		
Case GG	T 19, 20—U 11, 12 U 9, 10—T 1, 2	2
	L 89, 90—M 81, 82, 83 L 91, 92—M 98, 99, 100	2
	S 4, 17 S 16, 25 S 24, 37	3
	S 18, 23 S 19 S 36, 45	3
	Plats of Plan, 7, scale $\frac{1}{1000}$	2
	Index to “ “ “ “	1
	Plat of Plan 13, scale $\frac{1}{1000}$	1
<i>Plans from Actual Survey.</i>		
Sections. Sections. Sections.		
Case HH	Ee 1, Ff 10 Ee 20, Ff 11 Ee 21, Ff 30	3
	Ff 8, 13 Ff 9, 12, 29 Cc 1, Dd 10	3
	W 65, 76, 85 W 72, 89, 92 W 73, 74, 75	3
	W 86, 87, 88 W 90, 91 W 93, 94, 95, 96	3
	M 46, 47, 48 M 53, 54, 55 Z 61, 80	3
	Z 62, 63 Z 64, 77 Z 76, 85	3
	Z 78, 79 Z 81, 100 Z 82, 99	3
	Z 83, 98 Z 84, 97 Ee 20, Ff 11	3
	Y 90, 91 Cc 1, Dd 10 Cc 2, 3	3
		
<i>Carried forward ..</i>	.....	3,128

LIST OF PLANS. — *Continued.*

Indexed.	Classification.	Number of Plans.
<i>Brought forward ..</i>	.....	3,128
Case III	Plat of Plan 10, scale $\frac{1}{1000}$	1
	“ “ Plans 13 and 14 $\frac{1}{1000}$	1
	“ “ Parkway taking Plan 10.....	1
	<i>Plans from Actual Survey.</i>	
	Sections. Sections. Sections.	
	T 31, 50, 51 T 47, 48 T 63, 64	3
	T 53, 54 T 55, 66 T 77, 78	3
	T 32, 49 T 52, 69 T 65, 76	3
	T 95, 96 T 84, 85 T 74, 78, 88	3
	T 67, 68 T 72, 73 T 75, 86	3
Case JJ	Miscellaneous plans, estates and deeds.....	92
KK	<i>Plans from Actual Survey.</i>	
	Sections. Sections. Sections.	
	O 94, 95, 96, 97, R 6 X — 17	2
	W 55, 66 X 19, 20	2
	X 21, 22 X 18, 23, 38	2
	Miscellaneous plans, estates, etc.	10
	Plats of Plan 8, scale $\frac{1}{1000}$	3
	M 31 (part), 32 (part), 33 (part), 41 (part), 48, 49, 50, 51 (part), 60 (part)	1
	M 52, 53, 70, 51 (part), 60 (part)	1
	M 28, 29, 30, 31 (part), 32 (part), 33 (part) } N 21, 22, 23, 39, 40, 41 (part), 42..... }	1
	M 66, 75, 86 M 67, 74, 87	2
	Plan 4, scale $\frac{1}{1000}$ Y 98, 99, 100	2
	Dd 18, 19, 20 Dd 21, 22, Ee 30	2
	Ee 9, 10 Ee 11, 12	2
	Plans 6—12, two parts.....	2
	X 91, 92 Y 81, 82, X 90	2
	Dd 1, 2, 3 Dd 40, Ee 31, 32	2
	Back Bay Park and vicinity.....	1
	M 67 M 68, 69 M 70, N 61, 62, 63	3
	M 71, 72, 73 M 89, 90 N 5, 6	3
	N 11, 12 N 13, 14 N 15, 16, 17	3
<i>Carried forward ..</i>	.....	3,284

LIST OF PLANS.—Continued.

Indexed.	Classification.			Number of Plans.
<i>Brought forward ..</i>	.....			3,284
	<i>Plans from Actual Survey.</i>			
	Sections.	Sections.	Sections.	
	N 23, 24	N 25, 26	N 27, 28, 29	3
	O 40, N 31, 32, 33	N 59, 60	N 78, 79, 80	3
	N 81, 82, 83	O 1, N 10	O 17, 18	3
	O 19, 20	O 23, 24	N 30, O 21, 22	3
	O 27, 28	O 29, 30	O 31, 32	3
	O 33, 34	O 35, 36	O 37, 38	3
Case LL	O 39, 40	N 50, O 41	O 42, 43	3
	O 44, 45	O 46, 47	O 48, 49, 50	3
	O 52,	O 53, 54	O 55, 56	3
	O 57, 58	N 51, O 59, 60	O 61, 62, 63	3
	O 64, 65	O 66, 67	O 68, 69	3
	O 73, 74	O 75, 76	O 77, 78	3
	O 83, 84, 85	O 87, 88	O 92, 93, 72, 89	3
	X 73, 68		Ee 3, 18, 23, X 83, 98	2
	X 84, 97, Ee 4, 17		X 86, 95, Ee 6, 15, 26	2
	X 69, 72—X 67, 74		X 87, 94, Ee 7, 14, 27	3
	X 32, 49, 52		X 85, 96, Ee 5, 16, 25	2
	Ee 2, 19, X 82, 99		X 30, 81—X 48, 53	3
	X 44, 54	X 50, 51	X 46, 55	3
Case MM.....	X 66, 75	X 65, 76	X 45, 56	3
	X 88, 89	X 70, 71	X 81, 100	3
	Y 21, 40	Y 41, 60	Y 61, 80	3
	Index Plans,—Plan 6, scale $\frac{1}{1000}$			1
	Contour plan of Wellington Hill.....			1
	Miscellaneous rolled plans of estates			12
	“ deed tracings.....			6
	<i>Plans from Actual Survey.</i>			
	Sections.	Sections.	Sections.	
	W 33, 48	W 34, 47	W 49, 50	3
Case NN	Ce 3, 18	Ce 4, 17	Ce 5, 16	3
	Ce 14, 27, 34	Ce 19	Ce 24, 37	3
	Ce 25, 36	Ce 26, 35	Ce 45	3
<i>Carried forward ..</i>	.....			3,379

LIST OF PLANS.—*Concluded.*

Indexed.	Classification.			Number of Plans.
<i>Brought forward</i>..	.....			3,379
	<i>Plans from Actual Survey.</i>			
	Sections.	Sections.	Sections.	
Case NN.....	Cc 46, 55	Cc 6, 15	Cc 23	3
	Z 85, 96	Z 86, 95	Z 94, Cc 7	3
	Z 71, 90	Z 72, 89	Z 68, 73	
	Z 88, 93	Cc 47, 54	Cc 67, 74	
	Cc 66, 75	Cc 8, 13	Cc 28, 33	
	Cc 48, 53, 68			
Case OO.....	Miscellaneous tracings and blue prints.....			153
“ PP.....	Plans and Profiles showing grades			223
“ QQ.....	“ “ “ “ “	.....		222
“ RR.....	“ “ “ “ “	.....		185
“ SS .....	“ “ “ “ “	.....		156
“ TT .....	“ “ “ “ “	.....		135
“ VV .....	“ “ “ “ “	.....		22
“ “	Miscellaneous rolled plans.....			29
“ WW	Grade plans			32
	Contour plans			37
Drawer A-M.....	Miscellaneous plans in B of S, Sections A to M ..			25
“ N.....	“ “ “ “ “	Section N		28
“ O-V... ..	“ “ “ “ “	Section O to V ...		3
“ W	“ “ “ “ “	Section W		20
“ X-Z	“ “ “ “ “	Sections X to Z...		10
“ Miscel.....	“ “ “ “ “	.....		7
Total .....	.....			4,672

Not included in the foregoing list there are the following lithographed plans:			
Lithographed plans of City of Boston, scale, $\frac{1}{16000}$	Report, 1893	40	
" " " " " "	" 1894	10	
" " " " " "	" 1895	58	
" " " Bowdoin street, Hawkins street	" 1894	17	
" " " Boston Common and vicinity	"	83	
" " " Section T 2		190	
" " " " N 24		196	
" " " " N 25		196	
" " " " O 74		196	
" " " " O 75		196	
" " " " O 77		196	

Respectfully submitted,

JOHN P. DORE,
JOHN H. DUANE,
GEORGE H. INNIS,
Street Commissioners.



ANNUAL REPORT
OF THE
TREASURY DEPARTMENT
FOR THE FINANCIAL YEAR 1897-98.

CITY OF BOSTON, TREASURY DEPARTMENT,
CITY HALL, February 17, 1898.

HON. JOSIAH QUINCY,
Mayor of the City of Boston:

SIR: I herewith transmit the annual report of the transactions of the Treasury Department, which includes the receipts and payments of the City of Boston and County of Suffolk for the financial year of 1897-98, beginning February 1, 1897, and terminating January 31, 1898, with a statement of the debt of the City and the Sinking Funds for the redemption of the same, an exhibit of the yearly receipts and payments of the City of Boston and County of Suffolk, the aggregate of the receipts and payments of the Sinking Funds, for the period of sixteen years six and a half months, the length of time of the occupation of the office of City Treasurer of Boston by the undersigned; also an Appendix showing the Trust Funds in the custody of the undersigned.

Respectfully submitted,

ALFRED T. TURNER,
City Treasurer.

ANNUAL REPORT OF THE CITY TREASURER FOR THE FINANCIAL YEAR 1897-98, WHICH ENDED JANUARY 31, 1898.

Balance of Cash on hand February 1, 1897, brought from the financial year 1896-97....			\$4,793,850 21
RECEIPTS.			
Received during the year 1897-98 on account of the City of Boston from:			
City Collector		\$20,417,783 42	
Temporary Loan, 1897-98, anticipation of Taxes:			
3.07 %	\$1,000,000 00		
3.04 %	1,000,000 00		
3 %	1,000,000 00		
2½ %	800,000 00		
2½ %	500,000 00		
2½ %	1,545,000 00		
2 %	1,000,000 00		
		6,845,000 00	
City Loans:			
South Union station, 3½ %	\$1,575,000 00		
Rapid Transit, 3½ %	1,200,000 00		
Laying-Out and Construction of High- ways:			
4 %	150,000 00		
3½ %	750,000 00		
Various Municipal Purposes, June 18 and 25, 1897:			
4 %	13,800 00		
3½ %	833,000 00		
Rapid Transit, Charlestown bridge, 3½ % ..	800,000 00		
School-houses:			
3½ %	500,000 00		
4 %	150,000 00		
Sewerage Loan, 3½ %	500,000 00		
Public Parks:			
3½ %	450,000 00		
4 %	50,000 00		
Stony Brook Improvement, 3½ %	400,000 00		
Various Municipal Purposes, Nov. 4, 1896, 4 %	270,500 00		
Various Municipal Purposes, June 18, 1897:			
3½ %	162,500 00		
4 %	164,000 00		
Additional supply of water, 3½ %	150,000 00		
New Ferry Landing:			
3½ %	102,800 00		
4 %	10,000 00		
Nurses' Home Site, 3½ %	101,000 00		
School Buildings, Improvements in, 3½ % ..	100,000 00		
Various Municipal Purposes, Oct. 29, 1897, 3½ %	74,000 00		
Wire Department, 4 %	50,000 00		
Mass. Historical Society Building, 3½ % ..	25,000 00		
House of Industry, Alterations, etc., Deer Island, 3½ %	20,000 00		
Fireboat, 3½ %	16,000 00		
Parental School, New Buildings, etc., 3½ % ..	7,000 00		
Dorchesterway, Betterments, etc., 3½ % ..	3,000 00		
		8,627,600 00	
Board of Commissioners of Sinking-Funds:			
For redemption of Debt	\$920,289 81		
For cost of redemption of Debt	1,091 34		
		921,381 15	
Trustees under the will of Ann White Vose, through the Trustees of Boston City Hos- pital:			
Ann White Vose Building		100,000 00	
Premium on loans negotiated		246,529 65	
Carried forward		\$37,158,294 22	\$4,793,850 21

TREASURY DEPARTMENT.

3

<i>Brought forward</i>		\$37,158,294 22	\$4,793,850 21
Interest on Bank Deposits:			
General Account.....	\$67,827 92		
Franklin Trades School Fund.....	7,023 74		
Ann White Vose Building.....	1,737 71		
		76,589 37	
Public Library Trust Funds:			
William C. Todd Donation.....	\$50,000 00		
Victorine Thomas Artz Donation.....	10,000 00		
20th Regiment Memorial Fund.....	5,000 00		
John Boyle O'Reilly Memorial Fund.....	1,000 00		
Caleb Davis Bradlee Bequest.....	1,000 00		
		67,000 00	
Gibson School Fund.....		37,500 00	
Pay-roll Tailings, Settlements with Cash-			
ier, parties unpaid.....		10,161 80	
New England Sanitary Product Co. Guar-			
antee Fund.....		5,000 00	
Sidewalk Assessments, Repayment of, Tail-			
ing account.....		2,385 09	
City Hospital Trust Funds:			
"Cheever Fund.".....		1,000 00	
Tax Titles, etc.....		497 70	
Samuel E. Sawyer Bequest:			
For Marcella Street Home.....	\$98 40		
For Horace Mann School.....	98 40		
		196 80	
Premium on Temporary Loan negotiated...		5 60	
			37,358,630 58
On account of the County of Suffolk:			
City Collector.....	\$240,738 85		
Pay-Roll Tailings.....	758 25		
			241,497 10
			<u>\$42,393,977 89</u>

PAYMENTS.

MADE ON ACCOUNT OF THE CITY OF BOSTON DURING THE FINANCIAL YEAR 1897-98.

On Mayor's drafts charged to the following appropriations:			
Assessing Department			\$149,781 58
Auditing Department			35,644 05
Board of Aldermen:			
Board of Aldermen	\$28,090 04		
Soldiers' Relief	217,866 90		
			245,956 94
Building Department:			
Department Expenses	\$84,490 12		
Board of Appeal	1,309 71		
			85,799 83
Bust of John Boyle O'Reilly			1,500 00
Cemetery Department:			
Cemetery Department	\$30,617 25		
Mount Hope Cemetery	13,549 05		
Soldiers' Burial Lot	2,500 00		
Water Pipes, etc.	2,990 62		
			49,656 92
City Clerk Department			49,401 08
City Council:			
Incidental Expenses	\$24,197 67		
City Council Proceedings	8,177 83		
			32,375 50
City Debt Requirements:			
City Debt	\$1,296,629 00		
Interest	1,952,518 20		
			3,249,147 20
City Loans, Redemption of:			
Redemption of City Debt Proper	\$420,289 81		
Redemption of Cochituate Water Debt	500,000 00		
Cost of Redemption of Matured Bonds	1,091 34		
			921,381 15
City Messenger Department:			
City Messenger Department	\$28,599 40		
Free Concerts	5,000 00		
			33,599 40
Clerk of Committees Department			12,973 28
Collecting Department			97,470 73
Common Council			31,752 63
Damages by Dogs, etc.			2,280 00
Election Department			137,521 18
Engineering Department			72,372 32
Fire Department:			
Fire Department	\$1,278,647 28		
Relief of Disabled Firemen	3,000 00		
Engine-house, Ward 23	14,794 24		
Fire-boat	10,893 75		
Ladder truck, house and chemical engine, Grove Hall	6,896 85		
Salt-water fire service	15,000 00		
			1,329,232 12
George B. Hyde Bequest			5,500 00
Health Department:			
Health Department	\$177,561 89		
Bath house, South Bay, Roxbury side	121 39		
			177,683 28
Hospital Department:			
Hospital Department	\$374,187 34		
Ann White Vose Building	2,139 64		
Coal Pockets	14,182 76		
Electric Light Plant	32,642 52		
Fire Service	1,592 65		
Furnishing Surgical Ward	9,889 46		
New Buildings, City Hospital	46,115 92		
Nurses' Home Site, furnishing, etc.	43,511 25		
			524,261 54
<i>Carried forward</i>			\$7,245,290 73

<i>Brought forward</i>		\$7,245,290 73
Institutions Department:		
General Expenses.....	\$42,230 09	
Children's Division.....	97,530 93	
Insane Division.....	117,195 90	
Pauper Division.....	332,471 30	
Summer Hospital, Rainsford Island.....	5,541 32	
New Lunatic Hospital.....	45,428 50	
Reconstruction of Wharves, etc.....	5,028 17	
Steamer "J. Putnam Bradlee," new boiler and equipment.....	11,987 86	
		657,414 07
Lamp Department.....		619,925 80
Law Department.....		42,041 14
Laying-Out and Construction of Highways:		
Laying-Out and Construction of Highways.....	\$740,122 23	
Interest on debt.....	134,530 50	
		874,652 73
Blue Hill and other avenues:		
Blue Hill and other avenues.....	\$480,515 14	
Interest on debt.....	3,617 15	
		484,132 29
Library Department:		
Library Department.....	\$260,138 25	
Branch library, Broadway Extension, improvements.....	1,010 44	
		261,148 69
Market Department		8,604 47
Mayor:		
Mayor.....	\$57,448 77	
Public Celebrations.....	29,833 83	
		87,282 60
Municipal Statistics Department		2,203 20
Overseeing of the Poor Department		133,804 09
Parade Ground, etc., for the Militia		9 00
Park Department:		
Park Department.....	\$143,512 00	
Public Parks.....	407,053 41	
Public Park, Wards 6 and 7.....	89,249 91	
Billings Field, construction.....	18 50	
Dorchesterway betterments, Re-payment of.....	2,571 66	
Gibson School Fund, land for playground, Playground, Billings Field, West Roxbury.....	37,500 00	
Playground, Billings Field, West Roxbury.....	418 75	
Playground, Fellows street, additional land.....	15,000 00	
Playground, First street.....	9,534 85	
Playground, Freeport street and Neponset avenue.....	4,000 00	
Playstead, Neponset.....	1,264 66	
Playstead, Neponset, construction.....	963 32	
Playstead, North Brighton.....	3,367 78	
Playground, North End.....	99,228 95	
Playground, Ward 3.....	50,000 00	
Strandway, from Marine Park, west.....	169,395 38	
		1,033,009 17
Phillips Street Fund, Income		1,000 00
Police Department:		
Police Department.....	\$1,667,875 82	
Police Charitable Fund, Income.....	9,988 37	
		1,677,864 19
Printing Department		162,227 36
Public Buildings Department:		
Public Buildings Department.....	\$281,436 13	
Fire-proofing Dome, etc., City Hall.....	22,918 41	
Improvements in Council Chamber and Chamber of Board of Aldermen.....	271 54	
Library Building, Dartmouth street.....	13,050 55	
Library Building, Dartmouth street, furnishing.....	8,809 95	
Massachusetts Historical Society Building, Old Town Hall, Brighton, reconstruction.....	50,000 00	
Public Bath-house.....	1,500 00	
Reconstruction, etc., Basement of Old Court-house.....	33,548 14	
Ward-room, Ward 7, Tyler street.....	229 76	
Ward-room, Ward 17, alterations.....	5,327 91	
Ward-room, Ward 19.....	6,200 88	
Ward-room, Ward 20.....	5,000 00	
	200 00	
		428,493 27
<i>Carried forward</i>		\$13,719,162 80

<i>Brought forward</i>			\$13,719,162 80
Public Grounds Department:			
Public Grounds Department.....	\$97,254 38		
Entrance to Orchard Park from Adams street.....	5,890 00		
Highland Park.....	10 00		
Playground, Fellows street.....	1,509 96		
Square, Bunker Hill, Vine and Moulton streets, improvement of.....	521 00		
Square, Cambridge, Murdock and Sparhawk streets.....	5,000 00		
			110,185 34
Randidge Trust Fund, Income.....			1,396 46
Rapid Transit:			
Rapid Transit.....	\$1,512,723 62		
Interest on Debt.....	129,649 32		
Charlestown Bridge.....	440,652 82		
			2,083,025 76
Registry Department.....			25,998 58
Reserved Fund.....			71,985 20
School Committee:			
School Committee.....	\$2,252,593 00		
Public Buildings, School Expenses.....	229,658 55		
Gibson School Fund, Income.....	1,754 34		
Horace Mann School Fund, Income.....	40 00		
Robert C. Winthrop Fund.....	109 96		
School-houses.....	605,845 97		
School-buildings, improvements in.....	252,517 83		
Brighton High School-house.....	322 31		
Grammar School-house, Bowdoin District, building.....	5,476 63		
Grammar School-house, Stoughton District, building.....	3,285 79		
Groton-street School, paving and fencing yard.....	1,996 10		
Mechanic Arts High School.....	3 42		
Mechanic Arts High School, furnishing ..	157 74		
Primary School-house, Aberdeen District, building ..	11,705 13		
Primary School-house, Canterbury and Sharon streets ..	128 11		
Primary School-house, Emerson District...	129 09		
Primary School-house, Field's Corner.....	6,000 00		
Primary School-house, Genesee street	1,147 04		
Primary School-house, Moulton street, additional land.....	5,000 00		
Primary School-house, North and West Ends	35,764 00		
			3,413,635 01
Sidewalk Assessments, Repayment of.....			3,202 66
Sinking Funds Department			2,402 78
South Union Station.....			1,440,623 39
Statues of Grant, Sheridan and Farragut.....			5,123 95
Street Department:			
Central Office.....		\$17,789 95	
Bridge Division:			
Bridge Division.....	\$126,529 32		
Cambridge Bridges Division.....	14,399 00		
Abolishment of Grade Crossings.....	98,545 61		
Allston Bridge.....	1,500 00		
Charles-river Bridge, draw, remodelling, etc.....	407 04		
Chelsea Bridge, North, rebuilding draw, etc.....	3,030 54		
Gold-street Bridge.....	27,223 38		
Harvard-street Bridge, reconstruction...	356 20		
Leyden-street Bridge, reconstruction.....	1,000 00		
Meridian-street Bridge, reconstructing draw	1,833 61		
Reconstruction of Bridges.....	1,884 62		
Reconstruction of Essex-street Bridge...	1,530 57		
Warren Bridge, reconstruction.....	2,000 00		
		280,239 89	
Ferry Division:			
Ferry Division.....	\$219,983 24		
New Ferry Landing	42,296 20		
Electric lights for ferry-boats	5,862 88		
		268,142 32	
Paving Division:			
Paving Division.....	\$690,178 68		
Adams street, Ward 24, reconstruction...	7,500 00		
<i>Carried forward</i>	\$697,678 68	\$566,172 16	\$20,876,741 93

TREASURY DEPARTMENT.

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<i>Brought forward</i>	\$697,678 68	\$566,172 16	\$20,876,741 93
Adelaide street, Ward 22, reconstruction ..	4,000 00		
Albany street, in front of Mass. Homoeo- pathic Hospital, asphaltting.	6,140 08		
Appleton street, Dartmouth to Tremont, macadamizing and regulating.	13,300 00		
Boylston street, Berkeley to Clarendon, asphaltting.	12,496 90		
Cabot street, Linden Park to Vernon, asphaltting.	6,770 47		
Carleton street, Ward 10, construction ...	354 96		
Centre street, Dorchester, reconstruction	7,132 90		
Centre street, Roxbury, from Hogg's Bridge to Day street, reconstruction....	5,000 00		
Centre street, Ward 23, construction....	10,000 00		
Charles street, Cambridge to Leverett, paving.	19,935 39		
Commonwealth avenue.	27,651 01		
Congress and L streets.	2,958 61		
Dudley street, Brook avenue to Upham's Corner, paving.	33,804 75		
Franklin street, Ward 25.	1,700 52		
Freeport street, Ward 24, retaining wall..	93 75		
Lamartine street, Ward 22, paving.	10,000 00		
Lincoln place, asphaltting and regulating	1,500 00		
McLellan street, old road to White street	1,639 56		
North Margin street, between Thacher street and Endicott street, asphaltting..	1,415 98		
Rand street, Roxbury, reconstruction...	1,995 45		
State street, paving.	18,000 00		
Street Improvements :			
Ward 1.	25,148 16		
Ward 2.	25,337 28		
Ward 3.	25,724 68		
Ward 4.	27,052 54		
Ward 5.	25,249 36		
Ward 6.	27,827 31		
Ward 7.	27,061 42		
Ward 8.	21,529 98		
Ward 9.	52,569 48		
Ward 10.	26,892 60		
Ward 11.	26,724 37		
Ward 12.	28,822 19		
Ward 13.	34,948 77		
Ward 14.	34,355 43		
Ward 15.	29,590 78		
Ward 16.	29,895 58		
Ward 17.	25,000 00		
Ward 18.	32,276 44		
Ward 19.	34,688 87		
Ward 20.	25,000 00		
Ward 21.	23,573 41		
Ward 22.	26,691 37		
Ward 23.	25,000 00		
Ward 24.	25,000 00		
Ward 25.	41,137 53		
Ward 12 (old).....	1,444 15		
Sydney street, Ward 20, reconstruction ..	5,560 54		
Tremont street, from Lenox street to Roxbury Crossing, paving.	17,024 45		
Unity street, Charter to Tileston, as- phaltting.	2,651 94		
Washington street, Dover to Union Park, paving with granite blocks.	20,000 00		
Washington street, from Eliot street to Dover street, paving.	35,000 00		
Western avenue, macadamizing and regulating.	9,721 07		
Wharf and buildings, East Boston, pur- chase of.	15,000 00		
Sanitary Division.		1,722,628 71	
Sewer Division :		492,665 21	
Sewer Division	\$295,522 25		
Sewerage Works.	464,830 00		
Canal-street relief sewer.	17,462 03		
Connections with Metropolitan Sewer, Charlestown.	20,630 36		
Connection with Metropolitan Sewer, East Boston.	19,125 67		
<i>Carried forward</i>	\$817,570 31	\$2,781,466 08	\$20,876,741 93

<i>Brought forward</i>	\$817,570 31	\$2,781,466 08	\$20,876,741 93
D-street outlet, and relief sewer, Dorchester avenue, South Boston	23,000 00		
Forest avenue Section, temporary sewer, outlet, etc.	1,314 94		
Pumping-station improvements	4,982 25		
Sewer outlet (low level), West Roxbury District	3,181 07		
Sewers, South Boston	794 71		
Sewer outlets, South Boston	16,104 92		
Shamrock-street outlet	7,041 95		
Storm sewer, Cornwall and Washington streets, Ward 22	596 48		
Stony Brook Damages	2,378 42		
Stony Brook Improvement	260,741 16		
Street Cleaning Division		1,137,706 21	
Watering Division		309,981 38	
		155,667 12	
			4,384,820 79
Street Laying-out Department:			
Street Laying-out Department	\$24,337 42		
Abbotsford street, Ward 21, widening and construction	585 00		
Calumet street, Ward 22, widening and construction	5,623 62		
Centre street, Ward 24	1,909 50		
Essex and Lincoln streets	57,122 08		
Extension of Columbus avenue, etc.	4,357 00		
Green street, Main to High, widening	3,372 00		
Pontine street, Ward 17, extension to Clifton street	7,000 00		
Quincy street, Ward 4, laying out and construction	4,336 44		
Wait street, laying out and construction	4,117 20		
Washington street, Ward 25	500 00		
Weld street, Ward 23, widening and construction	4,248 00		
Whitney street extension	1,919 00		
			119,427 26
Treasury Department			43,378 89
Temporary Loan, 1897-98			6,845,000 00
Water Department:			
Cochituate Division	\$808,596 15		
Interest on Debt	887,638 02		
Sinking-Fund. Requirments for Debt	193,395 00		
Additional Supply of Water	230,822 81		
Extension of Mains, etc.	281,782 32		
			2,402,234 30
Weights and Measures Department			23,431 31
Wire Department			52,028 94
			\$34,747,063 42
Total payments on Mayor's Drafts			
Amounts paid, but not drawn for by Mayor, through the Auditor's office, charged to the following accounts:			
Commonwealth of Massachusetts:			
State Tax	\$628,740 00		
National Bank Tax	552,002 99		
Liquor Licenses	364,212 12		
Metropolitan Sewer Loan, Sinking Fund	14,279 56		
Metropolitan Sewer Loan, Interest on	68,479 18		
Metropolitan Sewer, Cost of Maintenance	58,589 35		
Metropolitan Sewer Loan, Neponset Valley, Sinking Fund	1,422 17		
Metropolitan Sewer Loan, Neponset Valley, Interest on	1,861 24		
Metropolitan Sewer, Neponset Valley, Cost of Maintenance	1,969 80		
Abolishment of Grade Crossings Account	45,795 53		
Abolishment of Grade Crossings, Interest on	16,882 39		
Armory Loan Sinking Fund	12,623 15		
Armory Loan, Interest on	19,800 00		
Corporation Tax	5,496 06		
		\$1,792,153 54	
Board of Commissioners of Sinking Funds:			
Revenue Collected	\$194,565 15		
Premium on Loans	246,529 65		
		441,094 80	
<i>Carried forward</i>		\$2,233,248 34	\$34,747,063 42

TREASURY DEPARTMENT.

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<i>Brought forward</i>		\$2,233,248 34	\$84,747,063 42
Public Library Trust Funds:			
Todd Donation.....	\$50,000 00		
Artz Donation.....	10,000 00		
20th Regt. Memorial Fund.....	5,000 00		
Mead Bequest.....	2,500 00		
O'Reilly Memorial Fund.....	1,000 00		
		68,500 00	
Gibson School Fund.....		37,500 00	
Pay-roll Tailings, payments by Cashier to parties not paid by Paymasters.....		8,410 51	
Mount Hope Cemetery Trust Fund.....		5,900 00	
Residue Tax Sales, etc.....		4,232 95	
Taxes refunded.....		2,421 35	
Old Claims, City Account.....		2,083 46	
City Hospital Trust Funds:			
Burrell Ether Prize Fund.....	\$1,000 00		
Cheever Fund.....	1,000 00		
		2,000 00	
Cochituate Water-rates refunded.....		1,421 73	
Evergreen Cemetery Trust Fund.....		800 00	
Liquor License refunded.....		687 50	
Sawyer Bequest:			
Horace Mann School Fund.....	\$300 00		
Marcella-street Home Fund.....	300 00		
		600 00	
Mystic Water-rates refunded.....		470 45	
Tax Titles, etc.....		342 70	
Protested Taxes refunded.....		128 70	
Sewer assessments refunded.....		33 75	
Tuition of Non-residents refunded.....		68 82	
Pedler's License refunded.....		25 00	
Duplicate and Overpayments to City Collector.....		19 12	
			2,368,894 38
Total payments on City account			\$87,115,957 80
<i>County of Suffolk.</i>			
Paid during the financial year 1897-98, as allowed and certified by the Auditor of the City of Boston acting as Auditor of the County of Suffolk, under authority of Sect. 24, Chap. 23, Public Statutes:			
County Buildings.....			\$33,657 77
Court House.....			29,227 63
Jail.....			37,268 50
Supreme Judicial Court.....			25,221 57
Superior Court, Civil Sessions.....			183,529 79
Superior Court, Criminal Session.....			81,260 26
Probate Court and office.....			24,547 25
Municipal Court, Civil Session.....			19,400 36
Municipal Court, Criminal Session.....			81,626 07
Municipal Court, Charlestown.....			9,114 90
East Boston District Court.....			7,449 90
Municipal Court, South Boston.....			10,335 15
Municipal Court, Dorchester District.....			5,662 98
Municipal Court, Roxbury District.....			11,930 67
Municipal Court, West Roxbury District.....			5,423 52
Municipal Court, Brighton District.....			5,312 30
Police Court, Chelsea.....			6,384 24
Insanity Cases.....			20,250 94
Medical Examinations.....			13,492 45
Registry of Deeds.....			59,152 48
Miscellaneous Expenses.....			17,708 64
House of Correction, South Boston.....			81,003 90
House of Correction, Deer Island.....			177,983 46
Electric Lighting Plant, Deer Island.....			3,806 80
County Loans, Redemption of.....			17,000 00
County Debt Sinking-Fund Requirements.....			48,046 00
Total payments allowed by Auditor			\$1,015,797 53
Amounts drawn for by Auditor and approved by the Mayor:			
Interest on County Debt.....	\$130,790 00		
Superior Civil Court.....	779 17		
<i>Carried forward</i>	\$131,569 17		\$1,015,797 53

<i>Brought forward</i>	\$131,569 17		\$1,015,797 53
House of Correction, Deer Island	6,752 20		
House of Correction, South Boston	252 44		
Electric Lighting Plant, Deer Island	7,365 75		
House of Industry, Alterations and Ad- ditions	20,825 25		166,764 81
Other payments as County Treasurer:			
County fines to Complainant	\$612 80		
Pay-roll Tailings	295 29		
Allowance to Counsel	100 00		
Bounty for Destruction of Seals	36 00		
Bail refunded	25 00		
County fines awarded to wife	20 00		
Old Claims	16 00		1,105 09
Total payments on Account of the County of Suffolk			\$1,183,667 43
RECAPITULATION.			
Cash Balance, February 1, 1897			\$4,793,850 21
Receipts from February 1, 1897, to January 31, 1898, both inclusive:			
Account of City of Boston:			
City Collector	\$20,417,783 42		
Temporary Loans	6,845,000 00		
City Loans	8,627,600 00		
Other Sources	1,468,247 16	\$37,358,630 58	
Account of County of Suffolk:			
City Collector	\$240,738 85		
Other Sources	758 25	241,497 10	
			37,600,127 68
Payments from February 1, 1897, to January 31, 1898, both inclusive:			\$42,393,977 89
Account of City of Boston:			
General Drafts	\$13,487,500 75		
Pay-roll Drafts	10,546,950 19		
Special Drafts	10,712,612 48		
Amounts not drawn for by Mayor through Auditor's office	2,368,894 38	\$37,115,957 80	
Account of County of Suffolk:			
General Payments	\$1,015,797 53		
Special Drafts	166,764 81		
Other Amounts	1,105 09	1,183,667 43	
			38,299,625 23
Cash Balance, January 31, 1898, carried for- ward to Financial Year 1898-99			\$4,094,352 66

TREASURY DEPARTMENT.

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Dr. *Balance Sheet of the Treasury Department, January 31, 1898, ALFRED T. TURNER, City Treasurer.* Cr.

To Special appropriations, money derived from Loans carried forward to financial year 1898-99.....					
Appropriations and Excess of Income carried forward to financial year 1898-99.....		\$3,316,507 49			
Amounts held to the credit of the following accounts:			162,392 52		
Franklin Trades School Fund.....	\$355,004 68				
Ann White Vose Building.....	99,597 97				
Protested Taxes, General Appropriation Account.....	47,266 26				
Board of Commissioners of S. Funds, Revenue, Betterments, etc.....	23,530 80				
Residue Tax Sales, etc.....	20,025 71				
Protested Laying-Out and Construction of Highway Assessments.....	17,317 82				
Pay-roll Tailings, City Account.....	12,897 41				
Duplicate and Overpayment to City Collector.....	9,178 29				
Old Claims, City Account.....	7,260 40				
New England Sanitary Product Co., Guarantee Fund.....	5,000 00				
Sidewalk assessments, Repayment of.....	2,385 09				
Pay-roll Tailings, County Account.....	2,093 70				
Park Betterments Withheld.....	1,892 77				
Protested Betterments, Parkway, West Roxbury.....	1,647 83				
George B. Hyde Bequest.....	1,382 80				
Bay State Gas Co. Guarantee Fund.....	1,258 00				
Public Library Trust Funds.....	1,037 69				
City Debt due prior to Feb. 1, 1896.....	1,000 00				
Protested Betterments, Parkway, Old Harbor.....	984 82				
Carried forward.....	\$610,652 04	\$3,479,500 01			
By Cash deposited in National Banks, Trust Company and office:					
Atlantic National Bank.....	\$105,691 01				
Atlas National Bank.....	150,534 89				
Broadway National Bank.....	93,562 80				
Bunker Hill National Bank.....	100,500 05				
Central National Bank.....	112,002 95				
Columbian National Bank.....	32,907 07				
Everett National Bank.....	23,207 11				
Faneuil Hall National Bank.....	116,581 08				
First Ward National Bank.....	35,550 50				
Fourth National Bank.....	148,819 73				
Globe National Bank.....	151,586 23				
Howard National Bank.....	140,872 60				
Howard National Bank, Sidewalk Assessments Tailing Account.....	2,385 09				
Monument National Bank.....	31,955 04				
Mount Vernon National Bank.....	26,406 76				
National Bank of Redemption.....	174,229 62				
National Bank of the Republic.....	228,252 21				
National Market Bank of Brighton.....	28,603 13				
National Revere Bank.....	198,687 99				
National Rockland Bank.....	52,274 66				
National Security Bank.....	83,135 71				
National Security Bank, Pay-roll Tailings account.....	14,811 11				
Peoples National Bank.....	32,441 21				
Second National Bank, general account.....	150,404 61				
Shawmut National Bank.....	155,423 37				
Shoe and Leather National Bank.....	111,748 62				
State National Bank.....	436,127 99				
Third National Bank.....	125,160 55				
Columbia Trust Company.....	14,121 64				
Carried forward.....	\$3,078,045 33	\$3,078,045 33			

DEBT MATURED AND PAID DURING FINANCIAL YEAR 1897-98.

Date of Order.	Rate per cent.	Object of Loan.	Date Due.	Amount Due.	Totals.
Aug. 9, 1877 ..	6	Improved Sewerage.....	Oct. 1, 1897	\$30,000 00	
“ ..	5	“ “	“	145,000 00	
“ ..	4	“ “	“	100,000 00	\$275,000 00
Sept. 16, 1885 ..	3	Suffolk County Court-House	“	\$17,000 00	17,000 00
May 28, 1867 ..	6	Chestnut-Hill Reservoir..	Dec. 2, 1897	\$300,000 00	
Nov. 26, 1867 ..	6	“ “ “	“ 11, 1897	200,000 00	500,000 00
Oct. 15, 1869 ..	5	Consolidated Street Improvement, Sterling Loan.....	Jan. 1, 1898	\$145,289 81	
		Cost of Redemption, Sterling Loan.....		1,091 34	146,381 15
		Total Debt Paid		\$937,289 81	
		Cost of Redemption		1,091 34	
				\$938,381 15	\$938,381 15

NEW DEBT ISSUED DURING FINANCIAL YEAR 1897-98.

Date of Order.	Rate per cent.	Object of Loan.	Amount of Issue.	Date Payable.
Sect. 13, Chap. 516, Acts of 1896.....	3½	South Union Station....	\$1,275,000	April 1, 1902
Sect. 13, Chap. 516, Acts of 1896.....	3½	South Union Station....	300,000	Jan. 1, 1903
June 18 and 25, 1897.....	3½	Various Municipal Purposes, June 18 and 25, 1897.....	833,000	July 1, 1907
June 18 and 25, 1897.....	3½	Various Municipal Purposes, June 18 and 25, 1897.....	13,800	Oct. 1, 1907
Sept. 24, 1897.....	3½	Dorchesterway Betterments, repayments of, Various Municipal Purposes, Oct. 29, 1897.....	3,000	Jan. 1, 1908
Oct. 29, 1897.....	3½	Various Municipal Purposes, Oct. 29, 1897.....	47,000	Jan. 1, 1908
Nov. 4, 1896.....	4	Various Municipal Purposes, Nov. 4, 1896.....	13,500	Jan. 1, 1917
Nov. 4, 1896.....	4	Various Municipal Purposes, Nov. 4, 1896.....	3,000	April 1, 1917
Nov. 4, 1896.....	4	Various Municipal Purposes, Nov. 4, 1896.....	254,000	July 1, 1917
Oct. 24, 1896, accepting Chap. 323, Acts of 1891, and Chap. 418, Acts of 1892.....	4	Laying-Out and Construction of Highways, Wire Department.....	150,000	July 1, 1917
Feb. 19, 1897.....	4	Wire Department.....	50,000	July 1, 1917
July 10, 1895, June 7, 1896, accepting Chap. 435, Acts of 1895.....	4	New Ferry Landing.....	5,000	July 1, 1917
Dec. 22, 1896.....	3½	Fire-boat.....	16,000	July 1, 1917
Jan. 1, 1897.....	3½	Mass. Historical Society Building.....	25,000	July 1, 1917
Feb. 15, 1897.....	3½	Parental School, New Buildings and Furnishing.....	7,000	July 1, 1917
Feb. 15, 1897.....	3½	House of Industry, Deer Island, Alterations and Additions.....	20,000	July 1, 1917
June 18, 1897.....	3½	Various Municipal Purposes, June 18, 1897.....	162,500	July 1, 1917
June 18, 1897.....	4	Various Municipal Purposes, June 18, 1897.....	164,000	Oct. 1, 1917
July 10, 1895, June 7, 1896, accepting Chap. 435, Acts of 1895.....	4	New Ferry Landing.....	5,000	Oct. 1, 1917
Sept. 24, 1897.....	3½	School Buildings, Improvements in.....	100,000	Oct. 1, 1917
Oct. 29, 1897.....	3½	Various Municipal Purposes, Oct. 29, 1897.....	27,000	Jan. 1, 1918
April 6, 1897.....	3½	Nurses' Home Site, Furnishing, etc.....	101,000	Jan. 1, 1918
July 10, 1895, June 7, 1896, accepting Chap. 435, Acts of 1895.....	3½	New Ferry Landing.....	102,800	Jan. 1, 1918
Sect. 4, Chap. 408, Acts of 1895, Sect. 1, Chap. 453, Acts of 1896, Sect. 4, Chap. 408, Acts of 1895; Sect. 1, Chap. 442, Acts of 1897.....	4	School-Houses.....	150,000	July 1, 1927
Chap. 319, Acts of 1897.....	4	Public Park.....	50,000	Oct. 1, 1927
Sect. 6, Chap. 426, Acts of 1897, Sect. 1, Chap. 453, Acts of 1896, July 13, 1896, accepting Chap. 530, Acts of 1896.....	3½	School-houses.....	500,000	Jan. 1, 1928
Chap. 548, Acts of 1894.....	3½	Laying-Out and Construction of Highways, Sewerage.....	750,000	Jan. 1, 1928
Chap. 548, Acts of 1894.....	3½	Public Park.....	500,000	Jan. 1, 1928
Chap. 548, Acts of 1894.....	3½	Stony Brook Improvement, scrip.....	300,000	July 1, 1937
Chap. 548, Acts of 1894.....	3½	Charlestown Bridge.....	500,000	July 1, 1937
July 13, 1896, accepting Chap. 530, Acts of 1896.....	3½	Rapid Transit.....	1,000,000	July 1, 1937
		Charlestown Bridge.....	300,000	Jan. 1, 1938
		Rapid Transit.....	200,000	Jan. 1, 1938
		Stony Brook Improvement, scrip.....	100,000	Jan. 1, 1938
April 26, 1898.....	3½	Additional Supply of Water.....	\$8,477,600	
			150,000	Oct. 1, 1927
Total Debt Issued.....			\$8,627,600	

STATEMENT OF THE CITY OF BOSTON FUNDED DEBT.
FROM CITY TREASURER'S BOOKS.

Exclusive of the LAYING OUT AND CONSTRUCTION OF HIGHWAYS, COUNTY AND WATER DEBTS, on the 31st day of January, 1898, classified according to the financial years in which it becomes due, viz.:

Dates of Orders of Loans.	Interest.		Objects of the Loans.	Amounts of Loans.	When Due.	Total for Financial Years.
	Rate.	When Due.				
Feb. 4, 1860....	5	Matured	North street, Widening	\$1,000 00	Jan., 1874.	
Aug. 9, 1877....	4	April and Oct.	Improved Sewerage	\$100,000 00	Oct., 1898.	\$1,000 00
Jan. 3, 1889....	4	Jan. and July	"	1,000,000 00	Jan., 1899.	
Feb. 16, 1889....	4	"	Miscellaneous Purposes.....	769,000 00	"	
		"	"	416,000 00	"	2,255,000 00
Aug. 9, 1877....	5	April and Oct.	Improved Sewerage	\$32,000 00	April, 1899.	
July 23, 1889....	5	Jan. and July	Fort Hill Improvement.....	985,761 78	July, " ..	
Oct. 13, 1889....	5	"	Widening Hanover street, No. 2	600,000 00	"	
Mar. 18, 1889....	5	"	Library Building, Dartmouth street	500,000 00	"	
Sept. 28, 1889....	5	"	Miscellaneous Purposes	500,000 00	"	
Dec. 24, 1889, and Jan. 24, 1890....	5 $\frac{1}{2}$	April and Oct.	"	1,037,000 00	Oct., " ..	
Mar. 10, 1890....	5 $\frac{1}{2}$	Jan. and July	"	574,000 00	Jan., 1900.	4,228,761 78
Aug. 9, 1877....	4	April and Oct.	Improved Sewerage	\$1,267,000 00	April, 1900.	
Mar. 18, 1889....	4	Jan. and July	New Public Library, Dartmouth street	297,000 00	July, " ..	
Oct. 13, 1890....	4	April and Oct.	"	14,000 00	Oct., " ..	
Oct. 17, 1890....	4	"	Public Parks, Charlestown District	200,000 00	"	
Aug. 9, 1877....	5	"	Miscellaneous Purposes.....	670,000 00	"	
Jan. 27, 1891....	4	Jan. and July	Improved Sewerage	18,000 00	"	
Mar. 18, 1889....	4	"	Miscellaneous Purposes.....	460,000 00	Jan., 1901.	
Aug. 9, 1877....	4	"	New Public Library, Dartmouth street	180,000 00	"	
		"	Improved Sewerage	24,000 00	"	3,139,000 00
Aug. 9, 1877....	4	April and Oct.	Improved Sewerage	\$5,000 00	April, 1901.	
Chap. 516, Acts of 1896....	4	Jan. and July	"	10,000 00	Oct., " ..	
Aug. 9, 1877....	4	"	South Union Station	25,000 00	Jan., 1902.	
		"	Improved Sewerage	8,000 00	"	48,000 00
			Carried forward			\$9,701,761 78

TREASURY DEPARTMENT.

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STATEMENT OF THE CITY OF BOSTON FUNDED DEBT. — Continued.

Dates of Orders of Loans.	Interest.		Objects of the Loans.	Amounts of Loans.	When Due.	Total for Financial Years.
	Rate.	When Due.				
Dec. 24, 1881.....	4	April and Oct. ...	<i>Brought forward.</i>			\$24,719,386 78
April 26, 1884.....	4	Jan. and July	Muddy River Improvement.....	\$75,000 00	April, 1914.	
Dec. 29, 1893.....	4	" " " " " " " "	Improved Sewerage.....	50,000 00	July, " "	
" " " " " " " "	4	" " " " " " " "	Commonwealth-avenue Extension.....	100,000 00	" " " "	
July 12, 1894.....	4	April and Oct. ...	" " " " " " " "	100,000 00	Oct., " "	
Feb. 1, 1894.....	4	" " " " " " " "	Various Municipal Purposes, 1894.....	599,800 00	" " " "	
Jan. 1, 1894.....	4	" " " " " " " "	Schools.....	250,000 00	" " " "	
Feb. 1, 1894.....	4	" " " " " " " "	Crushed Stone for Street Improvements.....	50,000 00	" " " "	
" " " " " " " "	4	" " " " " " " "	Public Parks.....	500,000 00	" " " "	
Jan. 28, 1895.....	4	April and Oct. ...	Improved Sewerage.....	\$67,650 00	April, 1915.	1,724,800 00
Mar. 16, 1895.....	4	" " " " " " " "	New Lunatic Hospital, Furnishing.....	10,000 00	" " " "	
July 12, 1894.....	4	" " " " " " " "	Parental School for Boys.....	5,000 00	" " " "	
Jan. 4, 1895.....	4	" " " " " " " "	Various Municipal Purposes, 1894.....	213,000 00	" " " "	
April 22, 1895.....	4	" " " " " " " "	" " " " " " " "	17,000 00	" " " "	
Nov. 14, 1885.....	3 1/2	" " " " " " " "	" " " " " " " "	137,000 00	" " " "	
" " " " " " " "	3 1/2	" " " " " " " "	Charles-river Embankment.....	16,000 00	Oct., " "	
Feb. 1, 1894.....	4	" " " " " " " "	City Point Park.....	13,000 00	" " " "	
Sept. 27, 1895.....	4	" " " " " " " "	New Buildings, City Hospital.....	300,000 00	" " " "	
July 12, 1894.....	4	" " " " " " " "	House of Industry, Alterations and Additions.....	50,000 00	" " " "	
Jan. 4, 1895.....	4	" " " " " " " "	Parental School, New Buildings and Furnishing.....	87,000 00	" " " "	2,459,850 00
April 22, 1895.....	4	" " " " " " " "	Various Municipal Purposes, 1894.....	155,000 00	" " " "	
July 9, 1895.....	4	" " " " " " " "	" " " " " " " "	121,000 00	" " " "	
" " " " " " " "	4	" " " " " " " "	" " " " " " " "	38,500 00	" " " "	
Jan. 4, 1896.....	4	Jan. and July.....	Library Building, Dartmouth street, Furnishing.....	1,115,200 00	Jan., 1916.	
July 9, 1895.....	4	" " " " " " " "	Various Municipal Purposes, July 9, 1895.....	44,000 00	" " " "	
Jan. 4, 1895.....	4	" " " " " " " "	Various Municipal Purposes, July 9, 1895.....	500 00	" " " "	
July 9, 1895.....	4	April and Oct. ...	Various Municipal Purposes, July 9, 1895.....	\$3,000 00	April, 1916.	
April 24, 1886.....	3 1/2	" " " " " " " "	Bussey Park and Arboretum.....	4,000 00	" " " "	
June 12, 1886.....	3 1/2	" " " " " " " "	Arnold Arboretum.....	16,000 00	" " " "	
July 9, 1895.....	4	Jan. and July.....	Various Municipal Purposes, July 9, 1895.....	438,500 00	July, " "	50,000 00
Mar. 13, 1896.....	4	" " " " " " " "	Wire Department.....	50,000 00	" " " "	
May 5, 1896.....	4	" " " " " " " "	Sewer Outlet, South Boston.....	35,000 00	" " " "	

Dec. 31, 1895.....	Jan. and July.....	100,000 00	July, 1916.
June 15, 1896.....	April and Oct.....	1,000 00	" "
" " " " " "	" " " " " "	64,000 00	" "
Oct. 5, 1896.....	" " " " " "	25,000 00	" "
June 7, 1896.....	" " " " " "	16,000 00	" "
July 22, 1896.....	" " " " " "	25,000 00	" "
Oct. 4, 1896.....	" " " " " "	103,500 00	" "
Nov. 4, 1896.....	May and Nov.....	55,000 00	" "
Nov. 4, 1896.....	Jan. and July.....	923,500 00	Nov., 1917.
Nov. 4, 1896.....	" " " " " "	40,500 00	Jan., 1917.
June 30, 1896.....	" " " " " "	300,000 00	" "
Jan. 1, 1897.....	" " " " " "	50,000 00	" "
June 7, 1896.....	" " " " " "	5,000 00	" "
Nov. 4, 1896.....	April and Oct.....	\$3,000 00	April, 1917.
June 4, 1887.....	Jan. and July.....	400,000 00	July, " "
Nov. 4, 1896.....	" " " " " "	254,000 00	" "
Feb. 19, 1897.....	" " " " " "	50,000 00	" "
July 10, 1895.....	" " " " " "	5,000 00	" "
June 7, 1896.....	" " " " " "		" "
Chap. 435, Acts 1895.....	" " " " " "		" "
Dec. 22, 1896.....	" " " " " "	16,000 00	" "
Jan. 1, 1897.....	" " " " " "	25,000 00	" "
Feb. 15, 1897.....	" " " " " "	7,000 00	" "
June 18, 1897.....	" " " " " "	20,000 00	" "
July 13, 1887.....	April and Oct.....	162,500 00	" "
June 18, 1897.....	" " " " " "	500,000 00	Oct., " "
July 10, 1895.....	" " " " " "	250,000 00	" "
June 7, 1896.....	" " " " " "	164,000 00	" "
June 7, 1896.....	" " " " " "	5,000 00	" "
Chap. 435, Acts 1896.....	" " " " " "		" "
Sept. 24, 1897.....	" " " " " "	100,000 00	" "
Jan. 4, 1887.....	" " " " " "	450,000 00	Jan., 1918.
Feb. 10, 1887.....	Jan. and July.....		" "
Dec. 30, 1887.....	" " " " " "	27,000 00	" "
Oct. 29, 1897.....	" " " " " "	101,000 00	" "
April 6, 1897.....	" " " " " "		" "
July 10, 1895.....	" " " " " "	102,800 00	" "
June 7, 1896.....	" " " " " "		" "
Chap. 435, Acts 1896.....	" " " " " "		" "

2,642,300 00

\$33,081,336 75

Oct. 24, 1891.....	4	Apr. and Oct.	Library Building, Dartmouth street	325,000 00	Oct., 1923.
May 20, 1891.....	4	Jan. and July...	Public Parks	99,000 00	Jan., 1924.
May 17, 1893.....	4	Jan. and July...	Public Parks, Wards 6 and 7	\$100,000 00	July, 1924.
Oct. 24, 1891.....	4	April and Oct....	Public Parks, " "	100,000 00	Oct., " "
May 20, 1891.....	4	" "	Library Building, Dartmouth street	100,000 00	" " "
Oct. 23, 1893.....	4	" "	Public Parks	1,000,000 00	" " "
June 8, 1894.....	4	Jan. and July...	Public Parks, " "	1,000,000 00	Jan. 2, 1925.
Oct. 24, 1891.....	4	" "	Library Building, Dartmouth street	49,500 00	" " 1,
May 17, 1893.....	4	April and Oct....	Public Park, Wards 6 and 7	\$50,000 00	April, 1925.
Oct. 24, 1891.....	4	" "	Public Parks, " "	208,000 00	Oct., " "
Chap. 408, Acts of 1895.....	4	Jan. and July...	Library Building, Dartmouth street	150,500 00	July, 1926.
May 17, 1893.....	4	" "	School-houses.....	\$500,000 00	" " "
Chap. 433, Acts of 1896.....	3½	" "	Public Park, Wards 6 and 7	11,300 00	Jan., 1927.
Chap. 408, Acts of 1895.....	4	Jan. and July...	Public Parks.....	500,000 00	July, 1927.
Chap. 453, Acts of 1896.....	4	April and Oct....	School-houses.....	\$150,000 00	Oct., " "
Chap. 408, Acts of 1895.....	3½	Jan. and July...	Public Park Loan	50,000 00	Jan., 1928.
Chap. 442, Acts of 1897.....	3½	" "	School-houses.....	500,000 00	" " "
Chap. 426, Acts of 1897.....	3½	" "	Sewerage Loan	500,000 00	" " "
Chap. 433, Acts of 1896.....	3½	" "	Public Park Loan	450,000 00	" " "
July 2, 1894.....	4	April and Oct....	Charlestown bridge	\$10,000 00	Oct., 1934.
Chap. 548, Acts of 1894.....	4	" "	Rapid Transit.....	50,000 00	" " "
Chap. 548, Acts of 1894.....	4	April and Oct....	Rapid Transit.....	\$1,000,000 00	April, 1935.
Chap. 408, Acts of 1895.....	4	Jan. and July...	School-houses.....	500,000 00	July, " "
May 11, 1895.....	4	" "	Blue Hill and other avenues	1,000,000 00	" " "
			<i>Carried forward</i>	\$2,500,000 00	\$44,410,636 75

STATEMENT OF THE CITY OF BOSTON FUNDED DEBT. — *Concluded.*

Date of Orders of Loans.	Interest.		Objects of the Loans.	Amounts of Loans.	When Due.	Total for Financial Years.
	Rate.	When Due.				
Chap. 548, Acts of 1894.....	4	April and Oct....	<i>Brought forward</i>	\$2,500,000 00	.....	\$44,410,636 78
Chap. 548, Acts of 1894.....	3½	Jan. and July...	Charlestown bridge.....	10,000 00	Oct., 1895.	
Chap. 548, Acts of 1894.....	3½	April and Oct....	Rapid Transit	250,000 00	Jan., 1936.	2,760,000 00
Chap. 548, Acts of 1894.....	4	Jan. and July...	Rapid Transit.....	\$500,000 00	April, 1896.	
Chap. 548, Acts of 1894.....	4	Jan. and July...	Blue Hill and other avenues	1,000,000 00	July, "	
Chap. 548, Acts of 1894.....	4	"	Charlestown bridge.....	30,000 00	"	"
Chap. 548, Acts of 1894.....	4	April and Oct....	"	100,000 00	Oct., "	"
Chap. 548, Acts of 1894.....	3½	"	Rapid Transit	1,500,000 00	"	"
Chap. 548, Acts of 1894.....	3½	"	Stony Brook Improvement.....	100,000 00	"	"
Chap. 548, Acts of 1894.....	3½	Jan. and July...	Blue Hill and other avenues	500,000 00	Jan., 1897.	
Chap. 548, Acts of 1894.....	3½	"	Public Park Construction	500,000 00	"	"
Chap. 548, Acts of 1894.....	3½	"	Stony Brook Improvement, Scrip.....	\$300,000 00	July, 1897.	4,230,000 00
Chap. 548, Acts of 1894.....	3½	Jan. and July...	Rapid Transit	1,000,000 00	"	"
Chap. 548, Acts of 1894.....	3½	"	Charlestown bridge	500,000 00	"	"
Chap. 548, Acts of 1894.....	3½	"	"	300,000 00	Jan., 1938.	
Chap. 548, Acts of 1894.....	3½	"	Rapid Transit	200,000 00	"	"
Chap. 548, Acts of 1894.....	3½	"	Stony Brook Improvement, Scrip.....	100,000 00	"	"
Chap. 548, Acts of 1894.....	3½	"				2,400,000 00
Chap. 548, Acts of 1894.....	3½	"				\$53,800,636 78

STATEMENT OF COCHITUATE WATER DEBT, JANUARY 31, 1898.

FROM CITY TREASURER'S BOOKS.

In Addition to the City and County Debts, as heretofore stated, there exist Loans made on account of the Cochituate Water-Works, viz.:

Dates of Orders of Loans.	Interest.		Objects of the Loans.	Amounts of Loans.	When Due.	Total for Financial Years.
	Rate.	When Due.				
April 21, 1868.....	6	April and Oct.	Chestnut Hill Reservoir.....	\$250,000 00	June, 1898,	
" " " ".....	6	" " " ".....	Water-Works, Wards 13, 14, 15, Roxbury.....	200,000 00	" " " ".....	
June 29, 1868.....	6	" " " ".....	Chestnut-Hill Reservoir.....	540,000 00	Oct., " " " ".....	\$900,000 00
Dec. 15, 1868.....	6	" " " ".....	Water-Works, Wards 13, 14, 15.....	\$250,000 00	April, 1899.	250,000 00
July 2, 1870.....	6	Jan. and July.....	Chestnut-Hill Reservoir.....	\$250,000 00	Jan., 1901.	
July 19, 1870.....	6	" " " ".....	Water-Works, Ward 16, Dorchester.....	375,000 00	" " " ".....	
Mar. 21, 1871.....	6	April and Oct.	Renewal of Loan, due 1870-71.....	688,000 00	April, " " " ".....	
June 27, 1871.....	6	Jan. and July.....	Water-Works, Wards 13, 14, 15 and 16.....	300,000 00	July, " " " ".....	
" " " ".....	6	" " " ".....	High-Service, South Boston.....	30,000 00	" " " ".....	
April 12, 1872.....	6	" " " ".....	Additional Supply of Water.....	\$100,000 00	July, 1902.	1,643,000 00
April 26, 1872.....	5	April and Oct.	Renewal of Loan, due 1872-73 (£339,500 sterling).....	1,947,273 98	Oct., " " " ".....	2,047,273 98
April 11, 1873.....	6	" " " ".....	Additional Supply of Water.....	\$492,000 00	April, 1903.	
June 6, 1873.....	6	" " " ".....	Parker-Hill Reservoir.....	161,000 00	" " " ".....	
" " " ".....	6	" " " ".....	Water-Works, Wards 13, 14, 15 and 16.....	115,000 00	" " " ".....	
Dec. 20, 1873.....	6	" " " ".....	Water-Works.....	137,000 00	" " " ".....	
April 11, 1873.....	6	Jan. and July.....	Additional Supply of Water.....	8,000 00	Jan., 1904.	913,000 00
Dec. 20, 1873.....	6	April and Oct.	Water-Works.....	\$38,000 00	April, 1904.	
June 6, 1874.....	6	Jan. and July.....	Water-Works, Wards 13, 14, 15 and 16, and extension to Wards 17 and 19 (West Roxbury and Brighton).....	60,000 00	Jan., 1905.	199,000 00
Dec. 24, 1874.....	6	" " " ".....	Water-pipes, Wards 17 and 19.....	101,000 00	" " " ".....	
" " " ".....	6	April and Oct.	" " " ".....	\$49,000 00	April, 1905.	
April 30, 1875.....	6	" " " ".....	" " " ".....	43,700 00	" " " ".....	
Feb. 26, 1875.....	6	Jan. and July.....	Additional Supply of Water.....	44,000 00	July, " " " ".....	
" " " ".....	5	April and Oct.	" " " ".....	1,000,000 00	Oct., " " " ".....	
April 30, 1875.....	6	" " " ".....	Water-Works, Wards 17 and 19.....	6,000 00	" " " ".....	
<i>Carried forward.....</i>				\$1,192,700 00		\$6,042,273 98

STATEMENT OF COCHITUATE WATER DEBT. — *Continued.*

Dates of Orders of Loans.	Interest.		Objects of the Loans.	Amounts of Loans.	When Due.	Total for Financial Years.
	Rate.	When Due.				
April 30, 1895.....	6	Jan. and July.....	<i>Brought forward.</i>	\$1,192,700 00	.....	\$6,042,273.98
Dec. 31, 1875.....	6	" " ".....	Water Works, Wards 17 and 19.....	50,300 00	Jan., 1906.	" "
Dec. 31, 1875.....	5	April and Oct.....	" " ".....	32,250 00	" "	1,275,250 00
Feb. 26, 1875.....	6	" " ".....	" " ".....	8,750 00	April, 1906.	" "
Dec. 31, 1875.....	5	" " ".....	Additional Supply of Water.....	452,000 00	" "	" "
July 1, 1876.....	6	" " ".....	Water Works, Wards 17 and 19.....	4,000 00	Oct., "	" "
Dec. 31, 1875.....	5	" " ".....	Additional Supply of Water.....	2,000,000 00	" "	" "
Dec. 31, 1875.....	6	Jan. and July.....	Water Works, Wards 17 and 19.....	8,000 00	Jan., 1907.	" "
" " ".....	6	April and Oct.....	" " ".....	\$5,000 00	April, 1907.	2,572,750 00
" " ".....	6	Jan. and July.....	" " ".....	1,000 00	July, "	" "
" " ".....	5	April and Oct.....	" " ".....	1,000 00	Oct., "	" "
April 20, 1878.....	4	" " ".....	Additional Supply of Water.....	\$988,000 00	April, 1908.	7,000 00
" " ".....	5	" " ".....	" " ".....	12,000 00	" "	" "
April 11, 1879.....	4	Jan. and July.....	" " ".....	\$82,000 00	July, 1909.	600,000 00
" " ".....	4½	April and Oct.....	" " ".....	268,000 00	Oct., "	" "
Mar. 20, 1880.....	4	" " ".....	New Main.....	\$250,000 00	April, 1910.	350,000 00
Aug. 17, 1881.....	4	" " ".....	Additional Supply of Water.....	\$324,000 00	April, 1912.	280,000 00
Mar. 3, 1883.....	4	Jan. and July.....	New Main.....	\$61,000 00	July, 1913.	324,000 00
June 2, 1883.....	4	" " ".....	Introduction of Meters and Inspection	50,000 00	" "	" "
" " ".....	4	April and Oct.....	Additional Supply of Water.....	336,000 00	Oct., "	" "
Jan. 4, 1884.....	4	Jan. and July.....	Introduction of " " ".....	250,000 00	Jan., 1914.	" "
June 2, 1883.....	4	" " ".....	" " ".....	7,000 00	" "	" "
" " ".....	4	" " ".....	Additional Supply of Water.....	209,000 00	" "	" "
" " ".....	4	April and Oct.....	" " ".....	\$18,500 00	April, 1914.	913,000 00
" " ".....	4	" " ".....	" " ".....	16,000 00	Oct., "	" "
Dec. 23, 1884.....	4	Jan. and July.....	High Service.....	50,000 00	Jan., 1915.	84,500 00

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Dec. 23, 1884....	4	April and Oct.	High Service.....	April, 1915.	
June 2, 1883....	4	" " " " " "	Additional Supply of Water.....	" " " "	\$144,200 00
Mar. 5, 1885....	3½	" " " " " "	Extension of Mains.....	" " " "	1,500 00
" " " " " "	3½	" " " " " "	" " " " " "	Oct., " " "	50,000 00
Dec. 23, 1884....	4	" " " " " "	High Service.....	" " " "	50,000 00
Mar. 5, 1885....	3½	Jan. and July.....	Extensions of Mains, etc.....	Jan., 1916.	23,000 00
Dec. 23, 1884....	4	" " " " " "	High Service.....	" " " "	100,000 00
					58,000 00
Dec. 23, 1884....	4	April and Oct.....	" " " " " "	April, 1916	\$28,500 00
Oct. 14, 1884....	4	" " " " " "	Additional Supply of Water.....	" " " "	100,000 00
April 17, 1886....	3½	Jan. and July.....	Extension of Mains, etc.....	July, " " "	75,000 00
" " " " " "	3½	April and Oct.....	" " " " " "	Oct., " " "	25,000 00
Oct. 14, 1884....	4	" " " " " "	Additional Supply of Water.....	" " " "	50,000 00
Dec. 23, 1884....	4	" " " " " "	High Service.....	" " " "	236,300 00
" " " " " "	4	Jan. and July.....	" " " " " "	Jan., 1917.	21,000 00
" " " " " "	4	April and Oct.....	" " " " " "	April, 1917.	\$161,000 00
Jan. 1, 1887....	3	" " " " " "	Extension of Mains, etc.....	" " " "	200,000 00
May 28, 1887....	3½	" " " " " "	Additional Supply of Water.....	" " " "	35,000 00
" " " " " "	3½	" " " " " "	Improvement of Lake Cochituate.....	" " " "	40,000 00
" " " " " "	3½	" " " " " "	Protection of Water Supply.....	" " " "	50,000 00
Dec. 23, 1884....	4	Jan. and July.....	Extension of Mains, etc.....	" " " "	150,000 00
Oct. 15, 1887....	4	April and Oct.....	High Service.....	July, " " "	7,000 00
Dec. 23, 1884....	4	" " " " " "	" " " " " "	Oct., " " "	16,700 00
" " " " " "	4	Jan. and July.....	Extensions of Mains, etc.....	" " " "	150,000 00
" " " " " "	4	" " " " " "	High Service.....	Jan., 1918.	20,000 00
June 4, 1888....	4	April and Oct.....	" " " " " "	April, 1918.	\$6,300 00
Sept. 29, 1888....	3½	Jan. and July.....	Extension of Mains, etc.....	July, " " "	100,000 00
" " " " " "	4	April and Oct.....	" " " " " "	Oct., " " "	100,000 00
April 15, 1889....	4	" " " " " "	" " " " " "	April, 1919.	\$200,000 00
Nov. 13, 1889....	3½	" " " " " "	Additional Supply of Water.....	Oct., " " "	145,000 00
" " " " " "	4	" " " " " "	" " " " " "	" " " "	300,000 00
" " " " " "	3½	May and Nov.....	Extension of Mains, etc.....	Nov., " " "	130,000 00
Jan. 3, 1890....	3½	Jan. and July.....	" " " " " "	Jan., 1920.	20,000 00
March 1, 1890....	3½	" " " " " "	High Service.....	" " " "	100,000 00
Oct. 13, 1890....	4	April and Oct.....	Extension of Mains, etc.....	" " " "	100,000 00
Nov. 13, 1889....	4	" " " " " "	Additional Supply of Water.....	Oct., 1920.	\$250,000 00
" " " " " "	4	" " " " " "	" " " " " "	" " " "	134,000 00
June 27, 1891....	4	" " " " " "	Extension of Mains, etc.....	April, 1921.	\$100,000 00
Nov. 13, 1889....	4	" " " " " "	Additional Supply of Water.....	Oct., " " "	162,500 00
<i>Carried forward</i>					\$262,500 00
					\$15,820,273 98

426,700 00

535,800 00

823,700 00

206,500 00

995,000 00

384,000 00

STATEMENT OF THE INDEBTEDNESS OF THE CITY OF BOSTON.

The Total Amount of the Funded Debt of the City, County and Water Debt, January 31, 1898, was \$79,592,910.76, made up of the following items:

City Debt:		
City Debt Proper	\$45,849,636 78	
Overdue and unpaid	1,000 00	
Charlestown Bridge (Rapid Transit)	950,000 00	
Laying Out and Construction of Highways	4,250,000 00	
Blue Hill and other avenues	2,500,000 00	
Rapid Transit	4,500,000 00	
		\$58,050,636 78
County of Suffolk		3,631,000 00
Water Debt		17,911,273 98
Total Funded Debt		<u>\$79,592,910 76</u>
Total Funded Debt as above		\$79,592,910 76
Less Sinking Funds as follows:		
Consolidated Street Improvement	\$2,119,621 50	
New Public Library, Special	590,859 94	
Twenty-year	6,251,716 03	
Ten-year	3,908,807 42	
Public Park	938,930 43	
Public Park, Special	1,617,982 94	
New Cambridge Bridge	66,301 47	
Stony Brook Improvement	132,824 22	
Improved Sewerage, Special	211,947 48	
New Ferry Landing	6,836 18	
Laying out and Construction of Highways	701,810 89	
Rapid Transit	263,654 07	
Rapid Transit, Charlestown Bridge, No. 1	26,306 20	
Rapid Transit, Charlestown Bridge, No. 2	11,778 00	
Blue Hill and other avenues	254,642 30	
School-houses, No. 1	13,653 00	
School-houses, No. 2	72,363 92	
South Union Station	22,518 73	
Suffolk County Court-House	426,485 57	
Suffolk County, General	57,124 67	
Sewerage Loan	29,445 00	
Cochituate Water	9,852,760 01	
		27,578,369 97
Less in hands of City Treasurer to redeem matured debt		<u>\$52,014,540 79</u>
Net debt January 31, 1898		1,000 00
		<u>\$52,013,540 79</u>
Divided as follows:		
City debt Proper	\$35,659,375 33	
Rapid Transit Debt	4,236,345 93	
Rapid Transit, Charlestown Bridge Debt	911,915 80	
County Suffolk Debt	3,147,389 76	
Water Debt	8,058,513 97	
	<u>\$52,013,540 79</u>	

INTEREST PAYABLE ON FUNDED DEBT DURING FINANCIAL YEAR 1898-99.

CLASS OF LOANS.	1898. April.	1898. May.	1898. June.	1898. July.	1898. Oct.	1898. Nov.	1898. Dec.	1899. Jan.	Totals.
City Proper.....	\$423,883	\$4,470	\$14,000	\$432,413	\$424,349	\$4,470	\$14,000	\$432,413	\$1,749,998
Laying-Out and Construction of Highways.....	12,380	.....	1,000	68,495	12,380	.....	1,000	68,495	103,750
Blue Hill and other avenues.....	.....	.....	.....	48,750	.....	.....	.....	48,750	97,500
Rapid Transit.....	56,000	.....	.....	25,375	56,000	.....	.....	25,375	102,750
County of Suffolk.....	53,190	.....	.....	11,950	53,190	.....	.....	11,950	130,280
Consolidated Street Improvement, Sterling Loan..	.....	.....	.....	* 98,000	.....	.....	.....	*98,000	196,000
Cochituate Water	\$545,453	\$4,470	\$15,000	\$684,983	\$545,919	\$4,470	\$15,000	\$684,983	\$2,500,278
Cochituate Water, Sterling Loan.....	306,108	2,275	5,609	67,749	203,921	2,275	.....	67,749	745,686
	* 48,938	.....	.....	.....	*48,938	.....	.....	.....	97,876
	\$900,499	\$6,745	\$20,609	\$752,732	\$888,778	\$6,745	\$15,000	\$752,732	\$3,343,840

* Interest payable in London.

TOTAL RECEIPTS AND PAYMENTS OF TREASURY DEPARTMENT FOR SIXTEEN YEARS SIX AND A HALF MONTHS.

Statement of the Receipts and Payments made during the Administration of the office of City Treasurer, by Alfred T. Turner, from July 16, 1881, to January 31, 1898, both inclusive — sixteen years six and a half months, with a recapitulation on page 32, viz. :

Year.	Balance on hand.	Receipts.	Payments.	Total Receipts and Payments.
1881-82	At commencement of first year in office, July 16, 1881: \$981,918 71 At the commencement of each financial year:	\$15,769,449 12	\$14,686,058 76	\$30,455,507 88
1882-83	\$2,065,309 07	20,632,553 78	20,133,849 30	40,766,403 08
1883-84	2,564,013 55	22,952,591 92	21,482,406 12	44,434,998 04
1884-85	4,034,199 35	19,164,994 71	19,870,230 82	39,035,225 53
1885-86	3,328,963 24	18,897,230 39	19,207,390 10	38,104,620 49
1886-87	3,018,803 53	20,601,313 60	19,539,436 04	40,140,749 64
1887-88	4,080,681 09	20,411,011 08	20,702,358 96	41,113,370 04
1888-89	3,789,333 21	22,940,943 25	23,671,438 95	46,612,382 20
1889-90	3,058,837 51	25,075,514 96	22,903,033 20	47,978,548 16
1890-91	5,231,319 27	22,296,312 93	22,574,312 36	44,870,625 29
{ Nine months, May 1, 1891, to	Jan. 31, 1892.			
{ 1891-92	4,953,319 84	19,696,853 37	21,549,375 42	41,246,228 79 }
1892-93	3,100,797 79	29,083,217 95	29,965,097 07	59,048,315 02
1893-94	2,218,918 67	37,598,979 09	36,844,214 19	74,443,193 28
1894-95	2,973,683 57	32,833,603 12	32,400,898 96	65,234,502 08
1895-96	3,406,387 73	32,637,998 28	32,497,606 34	65,135,604 62
1896-97	3,546,779 67	36,742,624 80	35,495,554 26	72,238,179 06
1897-98	4,793,850 21	37,600,127 68	38,299,625 23	75,899,752 91
		\$434,935,320 03	\$431,822,886 08	\$866,758,206 11
Cash Balance July 16, 1881.				\$981,918 71
Receipts July 16, 1881, to January 31, 1898.				434,935,320 03
				\$435,917,238 74
Payments July 16, 1881, to January 31, 1898.				431,822,886 08
				\$4,094,352 66
Cash Balance January 31, 1898.				

Recapitulation of the Receipts and Payments for Sixteen Years six and one-half months ending January 31, 1898, during the term of Alfred T. Turner, City Treasurer, from July 16, 1881 to January 31, 1898.

CITY AND COUNTY.

Receipts.	Payments.
<u>\$434,935,320 05</u>	<u>\$431,822,886 08</u>

Board of Commissioners of the Sinking Funds, receipts and payments during the same period.

Receipts.	Payments.
<u>\$93,171,668 60</u>	<u>\$90,347,576 83</u>

Total Transactions, City, County, and Sinking Funds, sixteen years six and a half months,	Receipts . \$528,106,988 63
	Payments . 522,170,462 91
Total	<u>\$1,050,277,451 54</u>

RECAPITULATION.

Cash balance, July 16, 1881, City and County account	\$981,918 71
Cash balance, July 16, 1881, Sinking Funds account	1,365,928 20
	<u>\$2,347,846 91</u>

Total receipts, City and County account and Sinking Funds account, July 16, 1881, to Janu- ary 31, 1898	\$528,106,988 63
Total payments, City and County account and Sinking Funds account, July 16, 1881, to Janu- ary 31, 1898	522,170,462 91
	<u>5,936,525 72</u>
	<u>\$8,284,372 63</u>

CASH BALANCE, JANUARY 31, 1898.

Cash balance, January 31, 1898, belonging to City of Boston, general City account	\$4,094,352 66
Sinking Funds account	4,190,019 97
	<u>\$8,284,372 63</u>

APPENDIX.

The City Treasurer had in his possession, January 31, 1898, as treasurer and as custodian, the following trust funds, viz.:

BABCOCK MUSIC FUND.

By the will of ARCHIBALD BABCOCK, who died August 10, 1862, the sum of \$3,000 was bequeathed to the City of Charlestown, and accepted by the City Council of that city, November, 1862, upon the conditions and for the purposes expressed by him in his last will and testament:

"The income to be annually expended in procuring the services of musicians, or of a band or bands of musicians, to perform in public in the City of Charlestown, within its present limits, free to all its citizens, one-half of said income to be annually expended in procuring musicians, or band or bands of musicians, to play on or near the small common at the 'Neck,' so called, at the corner of Main and Cambridge streets, preference to be given to citizens of Charlestown, due regard being had as to ability and quality."

Deposits in the Charlestown Five-Cents Savings Bank	. \$3,000 00
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CITY HOSPITAL FUNDS.

BALL FUND.—Bequest of JONAS BALL, the interest of which is to furnish clothing to indigent patients when leaving the hospital.

Invested in one certificate of indebtedness of City of Boston, due July 1, 1919, interest at four per cent. per annum	. \$1,000 00
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BURRELL ETHER PRIZE FUND.—Amount received from TOWNSEND WILLIAM THORNDIKE as follows: "I hereby give to the Trustees of the Boston City Hospital the sum of \$1,000, to found the 'Herbert L. Burrell Ether Prize Fund.' From the interest of this fund I desire that money prizes shall be given semi-annually to the surgical house officer, who administers ether or other anæsthetic in the most skilful and humane manner. Only surgical house officers of the Boston City Hospital shall be eligible to compete. The award is to be made by three judges, these to be appointed by the senior surgeon and the superintendent of the hospital. In case no house officer is considered worthy of the prize, the interest shall be added to the principal. Should the principal increase to such an amount as shall be considered sufficient to warrant the offering of a second prize of lesser amount, such second prize shall be established, and shall be known as the 'William H. Thorndike Ether Prize Fund.' The sixteenth day of October being the anniversary of the discovery of anæsthesia, that date shall be one of the days on which a prize shall be awarded."

Invested in one certificate of indebtedness of City of Boston, due January 1, 1917, interest at four per cent. per annum	. \$1,000 00
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CHEEVER FUND.—Donations by DR. DAVID W. CHEEVER, one of two thousand dollars accepted by the Trustees March 20, 1889, the other of

one thousand dollars received by City Treasurer May 1, 1897, the income of both to be expended as per following extract from his letter, and as per letter from Trustees of City Hospital April 24, 1897 :

"To purchase and present to each house surgeon when his term of service expires a small case (pocket case) of surgical instruments as a gift from me." Invested in certificates of indebtedness of City of Boston with rates of interest as follows :

One due April 1, 1917, four per cent. per annum	\$1,000 00
One due January 1, 1919, four per cent. per annum	2,000 00
	<u>\$3,000 00</u>

GOODNOW FUND. — A bequest of ELISHA GOODNOW, of South Boston, who died in 1851. By his will the city came into possession of certain real estate on Cross street and Third street, for the purpose of establishing a hospital for the sick, one-half of said funds to be applied for the establishment and maintenance of free beds, which should always be at the disposal and under the control of the officers of the government of said hospital for the time being. The proceeds from the sale of these estates and accumulated interest were invested in certificates of indebtedness of City of Boston, with rates of interest as follows :

One due April 1, 1906, six per cent. per annum	\$1,000 00
One due April 1, 1913, four per cent. per annum	16,500 00
One due April 1, 1915, four per cent. per annum	4,500 00
One due October 1, 1917, four per cent. per annum	4,000 00
	<u>\$26,000 00</u>

GOODNOW LIBRARY FUND. — Donation of GEORGE GOODNOW, the interest of which is to be expended annually by the Board of Trustees in replenishing the library of the hospital with books and pamphlets suitable for the reading of the patients during convalescence.

Invested in one certificate of indebtedness of City of Boston, due April 1, 1913, interest at four per cent. per annum

\$1,000 00

HEMMENWAY FUND. — Donation of Mrs. ELLEN L. HEMMENWAY, for the support of a free bed in the City Hospital in memory of her late husband, Charles P. Hemmenway.

Invested in one certificate of indebtedness of City of Boston, due October 1, 1923, interest at four per cent. per annum, ...

\$5,000 00

NICHOLS FUND. — Bequest of LAWRENCE NICHOLS, who died in September, 1862, of \$1,000, less internal-revenue tax, "towards the establishment and endowment of a City Hospital," and from the executor of the will as a residuary legatee, \$530.50. These amounts and accumulated interest were invested in

One certificate of indebtedness of City of Boston, due July 1, 1907, interest at six per cent. per annum	\$1,000 00
One certificate of indebtedness of City of Boston, due April 1, 1913, interest at four per cent. per annum	1,000 00
	<u>\$2,000 00</u>

NORCROSS FUND. — Donation of OTIS NORCROSS, formerly Mayor of the City, the interest of which is to furnish clothing to indigent patients when leaving the hospital.

Invested in one certificate of indebtedness of City of Boston, due October 1, 1917, interest at four per cent. per annum

\$2,000 00

PERKINS FUND.—Bequest of MARY G. PERKINS, the income of which is to be expended for Medical Library and artificial limbs and surgical appliances, for the use of patients leaving the hospital.

Invested in one certificate of indebtedness of City of Boston, due January 1, 1919, interest at four per cent. per annum \$7,500 00

SHAW FUND.—Bequest of MARY LOUISA SHAW, the income of which is to be expended by the Trustees for the purchase of flowers and fruit for the use and comfort of the patients in the hospital.

Invested in one certificate of indebtedness of City of Boston, due April 1, 1905, interest at six per cent. per annum . . . \$2,000 00

ANN WHITE VOSE BEQUEST.—February 19, 1897, received from George White and Francis C. Welch, trustees under the will of ANN WHITE VOSE, through the Trustees of the City Hospital, one hundred thousand dollars for the purpose of erecting a building in connection with the City Hospital Buildings, to be known as the "Ann White Vose Building." Accepted by vote of Trustees, February 17, 1897.

Amount received as above \$100,000 00
Interest on deposit to January 1, 1898 1,737 71

Paid on Mayor's drafts for architectural and other expenses, \$101,737 71
2,139 64

Amount of Fund January 31, 1898, deposited in Manufacturers National Bank \$99,598 07

RECAPITULATION OF CITY HOSPITAL TRUST FUNDS.

Ball Fund	\$1,000 00
Burrell Ether Prize Fund	1,000 00
Cheever Fund	3,000 00
Goodnow Fund	26,000 00
Goodnow Library Fund	1,000 00
Hemmenway Fund	5,000 00
Nichols Fund	2,000 00
Norcross Fund	2,000 00
Perkins Fund	7,500 00
Shaw Fund	2 000 00
	\$50,500 00
Ann White Vose Bequest	99,598 07
	<u>\$150,098 07</u>

DORCHESTER SOUTH CEMETERY TRUST FUND.

Amount paid by the owners of lots in Dorchester South Cemetery, the income of which is to be expended for the perpetual care of said lots. Invested in certificates of indebtedness of the City of Boston, maturing and bearing interest as follows:

One due April 1, 1913, four per cent. per annum . . .	\$300 00
One due January 1, 1916, four per cent. per annum . . .	100 00
	<u>\$400 00</u>

EVERGREEN CEMETERY FUND.

Amount paid by the owners of lots in Evergreen Cemetery, the income of which is to be expended for the perpetual care of lots. Invested

in certificates of indebtedness of the City of Boston, maturing and bearing interest as follows:

One due October	1, 1900, five per cent. per annum	\$100 00
One due April	1, 1902, four per cent. per annum	800 00
One due April	1, 1913, four per cent. per annum	200 00
One due October	1, 1914, four per cent. per annum	500 00
One due January	1, 1916, four per cent. per annum	100 00
One due October	1, 1917, four per cent. per annum	500 00
One due October	1, 1917, four per cent. per annum	500 00
One due January	1, 1918, three and one-half per cent. per annum	300 00
One due November	15, 1919, three and one-half per cent. per annum	200 00
One due October	1, 1923, four per cent. per annum	800 00
One due October	1, 1923, four per cent. per annum	100 00
		<u>\$4,100 00</u>

FOSS SEVENTEENTH OF JUNE AND FLAG FUNDS.

The City Council of the City of Charlestown, in August, 1866, accepted the bequests made in the will of JACOB FOSS, who died in Charlestown, June 2, 1866, the income of which is to be expended for the following purposes:

Celebrating the anniversary of the Battle of Bunker Hill, for either or all of the following purposes, viz.: "*Ringing the bells, firing salutes, music, or decorating the streets.*"

Invested in one certificate of indebtedness, City of Boston,
due October 1, 1917, interest at four per cent. per annum . \$2,000 00

Purchasing "United States flags for the use of the late City of Charlestown within its present limits; the flags so purchased to be used on all proper occasions, so that not more than two years' purchases shall be on hand at any time."

Invested in one certificate of indebtedness, City of Boston,
due October 1, 1917, interest at four per cent. per annum . \$2,000 00

FRANKLIN TRADES SCHOOL FUND.

The following is a copy of an order passed at a meeting of the Managers of the Franklin Fund, December 28, 1893:

Ordered, That the sum set apart from the general Franklin Fund as due to the City of Boston, on July 1, 1893, viz.: \$322,490.20 with its accumulations, be paid by the Treasurer of the Fund in January next to the City Treasurer, to constitute a special fund for the purchase of land, and for the erection thereon of the Franklin Trades School, and the equipment of the same; said expenditures to be made under the direction of such department as may for the time being be charged by the Statutes and Ordinances with the duty of erecting and furnishing public buildings in the City of Boston. The location of and plans for said school to be approved by the Board of Managers of said fund.

Attest:

JOHN P. BRAWLEY, *Acting Clerk.*

Received January 17, 1894, according to above order, from S. F. McCleary, Treasurer of the Franklin Fund, as follows:

City's portion of the fund to January 17, 1894.	\$328,940 00
Interest to January 17, 1894	360 48
	<u>\$329,300 48</u>
Interest on deposit to January 1, 1898	27,078 95
<i>Carried forward</i>	<u>\$356,379 43</u>

<i>Carried forward</i>		\$356,379 43
Mayor's Special Draft for expense of Managers		
visiting trades schools in other cities	\$1,800 00	
Less not expended, returned	514 42	
	\$1,285 58	
Paid on Mayor's General Drafts, small expenses, ...	89 17	
		1,374 75
Amount of fund, January 31, 1898, deposited in Second National Bank.		\$355,004 68

GEORGE B. HYDE FUND.

Amount received from executor of estate of GEORGE B. HYDE, being a legacy from said GEORGE B. HYDE, for the purpose of erecting a statue of Rufus Choate, and providing a suitable pedestal and foundation for the same. The amount of legacy, fourteen thousand dollars, with the income thereof, by order of the City Council to be invested, and on order of the Mayor, to be applied to the purchase and erection of said statue.

Amount of funds, invested in City bonds, February 1, 1896		\$14,000 00
July 1, 1896, sold one bond of \$1,000 at \$107	\$1,000 00	
December 1, 1897, sold two bonds of \$2,000 each at \$114.25	4,000 00	
December 1, 1897, sold one bond of \$1,000 at \$114.25	1,000 00	
		6,000 00
Leaving invested		\$8,000 00
Add proceeds of bonds sold		6,784 72
		\$14,784 72
Interest received on investment		1,598 08
		\$16,382 80
Expended for erection of statue		7,000 00
Amount of fund, January 31, 1898		\$9,382 80

Invested in certificates of indebtedness of City of Boston, maturing and bearing interest as follows:

Two due, January 1, 1925, four per cent. per annum, \$2,000 each	\$4,000 00
Four due, January 1, 1925, four per cent. per annum, \$1,000 each	4,000 00
	\$8,000 00
Cash in City Treasury	1,382 80
	\$9,382 80

MOUNT HOPE CEMETERY FUND.

Amounts paid by owners of lots in Mount Hope Cemetery, the income from which is to be expended by the trustees for the perpetual

care of lots. Invested in certificates of indebtedness of City of Boston, maturing and bearing interest as follows:

One due April 1, 1899, five per cent. per annum	\$2,000 00
One due October 1, 1900, five per cent. per annum	1,500 00
One due April 1, 1902, four per cent. per annum	2,500 00
One due October 1, 1902, four per cent. per annum	2,000 00
One due January 1, 1903, four per cent. per annum	500 00
One due October 1, 1903, four per cent. per annum	1,000 00
One due January 1, 1905, six per cent. per annum	1,000 00
One due April 1, 1906, six per cent. per annum	1,000 00
One due October 1, 1907, five per cent. per annum	1,000 00
One due October 1, 1911, four per cent. per annum	1,000 00
One due April 1, 1914, four per cent. per annum	1,000 00
One due October 1, 1914, four per cent. per annum	1,500 00
One due October 1, 1915, four per cent. per annum	3,000 00
One due January 1, 1916, four per cent. per annum	4,500 00
One due April 1, 1916, four per cent. per annum	1,000 00
One due July 1, 1916, four per cent. per annum	1,000 00
One due October 1, 1916, four per cent. per annum	3,000 00
One due April 1, 1917, four per cent. per annum	1,000 00
One due April 1, 1917, four per cent. per annum	2,000 00
One due October 1, 1917, four per cent. per annum	1,000 00
One due October 1, 1917, four per cent. per annum	2,000 00
One due January 1, 1918, three and one-half per cent. per annum	1,900 00
One due July 1, 1918, four per cent. per annum	1,500 00
One due October 1, 1918, four per cent. per annum	1,000 00
One due April 1, 1919, four per cent. per annum	1,000 00
One due July 1, 1919, four per cent. per annum	1,000 00
One due November 15, 1919, three and one-half per cent. per annum	1,400 00
One due October 1, 1920, four per cent. per annum	3,000 00
One due October 1, 1920, four per cent. per annum	1,000 00
One due October 1, 1920, four per cent. per annum	2,000 00
One due October 1, 1922, four per cent. per annum	1,000 00
One due October 1, 1923, four per cent. per annum	2,000 00
One due October 1, 1923, four per cent. per annum	1,700 00
One due October 1, 1923, four per cent. per annum	2,900 00
One due October 1, 1924, four per cent. per annum	1,225 00
Cash in City Treasury	\$57,125 00
	27 82
	\$57,152 82

PHILLIPS-STREET FUND.

This is a bequest of JONATHAN PHILLIPS, who died in July, 1860, who gave by his will to the City of Boston \$20,000 "as a trust fund, the income of which will be annually expended to adorn and embellish the streets and public places in said city," which has been invested in

One certificate of indebtedness of City of Boston, due January 1, 1906, interest at six per cent. per annum, payable to the Mayor of the City for the time being, for . . . \$20,000 00

POLICE CHARITABLE FUND.

By orders of the City Council, approved July 7, 1890, the principal and income of the fund known as the Police Charitable Fund, consisting of moneys which had been earned by police officers for fees as witnesses, in Municipal and District Courts of the City of Boston, were placed in charge of the City Treasurer, as custodian, and the Board of Police were authorized to expend the income thereof, and the amount appropriated for pensions of police, for the payment of pensions of members of the police force who have been placed on the pension roll,

and with the approval of the Mayor, for the relief of persons who have received an honorable discharge from the police force by reason of sickness, age, or other disability, and who are, in consequence thereof, in necessitous circumstances; and also for the relief of the widows and orphans, in necessitous circumstances, of police officers who have died while in the service of the city, or from the effects of injuries received in the execution of their duty.

Invested in certificates of indebtedness of City of Boston, maturing and bearing interest as follows:

One due April 1, 1899, five per cent. per annum	\$3,500 00
One due April 1, 1899, five per cent. per annum	1,000 00
One due October 1, 1900, five per cent. per annum	5,000 00
One due October 1, 1900, five per cent. per annum	2,400 00
One due October 1, 1900, four per cent. per annum	7,000 00
One due January 1, 1901, four per cent. per annum	3,000 00
One due October 1, 1901, four per cent. per annum	5,000 00
One due April 1, 1902, four per cent. per annum	7,000 00
One due April 1, 1902, four per cent. per annum	3,000 00
One due October 1, 1902, four per cent. per annum	6,000 00
One due January 1, 1903, four per cent. per annum	5,000 00
One due October 1, 1903, four per cent. per annum	4,000 00
One due October 1, 1903, four per cent. per annum	3,000 00
One due April 1, 1905, six per cent. per annum	10,000 00
One due April 1, 1905, six per cent. per annum	6,000 00
One due April 1, 1906, six per cent. per annum	2,750 00
One due April 1, 1906, six per cent. per annum	2,000 00
One due October 1, 1906, six per cent. per annum	4,000 00
One due April 1, 1907, six per cent. per annum	4,000 00
One due April 1, 1908, five per cent. per annum	3,000 00
One due October 1, 1911, four per cent. per annum	5,000 00
One due July 1, 1912, four per cent. per annum	4,000 00
One due October 1, 1912, four per cent. per annum	5,000 00
One due April 1, 1914, four per cent. per annum	5,000 00
One due October 1, 1914, four per cent. per annum	6,000 00
One due April 1, 1915, four per cent. per annum	4,500 00
One due April 1, 1915, four per cent. per annum	1,500 00
One due October 1, 1915, four per cent. per annum	6,000 00
One due April 1, 1916, four per cent. per annum	5,000 00
One due October 1, 1916, four per cent. per annum	6,300 00
One due April 1, 1917, four per cent. per annum	5,000 00
One due October 1, 1917, four per cent. per annum	7,500 00
One due October 1, 1917, four per cent. per annum	7,000 00
One due January 1, 1918, four per cent. per annum	3,000 00
One due January 1, 1918, four per cent. per annum	2,000 00
One due April 1, 1918, four per cent. per annum	300 00
One due July 1, 1918, four per cent. per annum	3,500 00
One due October 1, 1918, four per cent. per annum	3,500 00
One due January 1, 1919, four per cent. per annum	3,000 00
One due April 1, 1919, four per cent. per annum	3,000 00
One due July 1, 1919, four per cent. per annum	1,200 00
One due November 15, 1919, three and one-half per cent. per annum	12,000 00
One due January 1, 1920, four per cent. per annum	3,000 00
One due January 6, 1920, three and one-half per cent. per annum	2,000 00
One due July 1, 1920, four per cent. per annum	4,600 00
One due October 1, 1920, four per cent. per annum	1,000 00
One due October 1, 1920, four per cent. per annum	1,500 00
One due October 1, 1921, four per cent. per annum	3,500 00
One due October 1, 1921, four per cent. per annum	1,000 00
One due October 1, 1923, four per cent. per annum	4,000 00
One due October 1, 1923, four per cent. per annum	1,000 00

\$207,550 00

POOR WIDOWS' FUND.

This is a donation made by Mrs. JOANNA BROOKER and others, to the Selectmen of Boston for the time being.

The income from this fund is paid over in equal proportions to the Aldermen of this city, and they distribute the same, at their discretion, for the relief of POOR WIDOWS AND SICK PEOPLE. Invested in certificates of indebtedness of the City of Boston, maturing, and bearing interest as follows:

One due April 1, 1905, interest at six per cent. per annum .	\$1,700 00
One due October 1, 1917, interest at four per cent. per annum	1,500 00
	<u>\$3,200 00</u>

PUBLIC LIBRARY FUNDS.

ARTZ FUND. — Donation from VICTORINE THOMAS ARTZ of Chicago, of \$10,000, "the income of this sum to be employed in the purchase of valuable rare editions of the writings, either in verse or prose, of American and of foreign authors." These books are to be known as the "Longfellow Memorial Collection."

Invested in one certificate of indebtedness of City of Boston, due January 1, 1917, interest at the rate of four per cent. per annum \$10,000 00

BATES FUND. — This is a donation made by JOSHUA BATES of London, in March, 1853.

Invested in one certificate of indebtedness of City of Boston, due April 1, 1913, interest at four per cent. per annum \$50,000 00

"The income only of this fund is to be used, each and every year, expended in the purchase of such books of permanent value and authority as may be found most needful and most useful."

BIGELOW FUND. — This is a donation made by JOHN P. BIGELOW, in August, 1850, when Mayor of the City.

The income from this fund is to be appropriated to the purchase of books for the increase of the library.

Invested in one certificate of indebtedness of City of Boston, due April 1, 1913, interest at four per cent. per annum \$1,000 00

BOWDITCH FUND. — This is the bequest of J. INGERSOLL BOWDITCH of Boston, of \$10,000, to the Boston Public Library, the income of which is to be expended for the purchase of books of permanent value and authority in Mathematics and Astronomy.

Invested in one certificate of indebtedness of City of Boston, due January 1, 1920, interest at three and one-half per cent. per annum \$10,000 00

BRADLEE FUND. — Bequest of the late Rev. CALEB DAVIS BRADLEE, for the Boston Public Library.

Cash in City Treasury \$1,000 00

FRANKLIN CLUB FUND. — This is a donation made in June, 1863, by a literary association of young men in Boston, who, at the dissolution of

the association, authorized its trustees, Thomas Minns, John J. French and J. Franklin Reed, to dispose of the funds on hand in such a manner as to them should seem judicious. They elected to bestow it on the Public Library, attaching to it the following conditions: "In trust that the income, but the income only, shall, year by year, be expended in the purchase of books of permanent value for the use of the free Public Library of the city, and as far as practicable, of such a character as to be of special interest to young men." The Trustees expressed a preference for books relative to Government and Political Economy.

Invested in one certificate of indebtedness of City of Boston,
due January 1, 1914, interest at four per cent. per annum, \$1,000 00

GREEN FUND. — Donations of Dr. SAMUEL A. GREEN, formerly Mayor of the city, of \$2,000, the income of which is to be expended for the purchase of books relating to American history. Invested in certificates of indebtedness of City of Boston, maturing and bearing interest as follows:

One due October 1, 1900, five per cent. per annum	.	.	\$500 00
One due April 1, 1908, five per cent. per annum	.	.	1,000 00
One due April 1, 1914, four per cent. per annum	.	.	500 00
			<u>\$2,000 00</u>

CHARLOTTE HARRIS FUND. — Bequest of CHARLOTTE HARRIS of Boston, the object of which is stated in the following extract from her will: "I give to the Charlestown Public Library \$10,000 to be invested on interest, which interest is to be applied to the purchase of Books published before 1850. I also give to said Public Library my own private library, and the portrait of my grandfather, Richard Devens." Bequests accepted by City Council, July 31, 1877.

Invested in one certificate of indebtedness of City of Boston,
due October 1, 1917, interest at four per cent. per annum, \$10,000 00

THOMAS B. HARRIS FUND. — Bequest of THOMAS B. HARRIS of Charlestown, for the benefit of the Charlestown Public Library.

Invested in one certificate of indebtedness of City of Boston,
due April 1, 1914, interest at four per cent. per annum . \$1,000 00

ABBOTT LAWRENCE FUND. — This is the bequest of ABBOTT LAWRENCE of Boston.

Invested in one certificate of indebtedness of City of Boston,
due July 1, 1905, interest at six per cent. per annum . \$10,000 00

The interest on this fund is to be exclusively appropriated for the purchase of books for the said library, having a permanent value.

EDWARD LAWRENCE FUND. — This is the bequest of EDWARD LAWRENCE of Charlestown. The following clause from his will explains its purpose:

"To hold and apply the income, and so much of the principal as they may choose, to the purchase of special books of reference to be kept and used only at the Charlestown Branch of said Public Library."

Invested in one certificate of indebtedness of City of Boston,
due April 1, 1916, interest at four per cent. per annum . \$500 00

CHARLES G. LORING MEMORIAL FUND. — Donation from family of CHARLES GREELY LORING, deceased, the income of which to be expended for the purchase of books for the West End Branch.

Invested in one certificate of indebtedness of City of Boston,
 due January 1, 1916, interest at four per cent. per annum, \$500 00

CHARLES G. MEAD FUND.—Bequest of CHARLES G. MEAD, the same to constitute a trust fund to be designated the "Charles G. Mead Trust Fund," for the promotion of the objects of the Public Library, in such manner as the government of said library shall deem best, and so far as said government shall deem it consistent with the objects of the library to be used for the benefit of the South Boston Branch Library.

Invested in one certificate of indebtedness of City of Boston,
 due January 1, 1917, interest at the rate of four per cent
 per annum \$2,500 00

O'REILLY MEMORIAL FUND.—Donation from the Papyrus Club, in memory of JOHN BOYLE O'REILLY, late a member of the club, the income to be devoted to the purchase of books for the Boston Public Library.

Invested in one certificate of indebtedness of City of Boston,
 due July 1, 1917, interest at four per cent. per annum . \$1,000 00

PHILLIPS FUND.—This is a donation made by JONATHAN PHILLIPS of Boston, in April, 1853.

Invested in one certificate of indebtedness of City of Boston,
 due April 1, 1913, interest at four per cent. per annum . \$10,000 00

The interest on this fund is to be used exclusively for the purchase of books for said library.

Also a bequest by the same gentleman in his will, dated 28th of September, 1849.

Invested in one certificate of indebtedness of City of Boston,
 due January 1, 1906, interest at six per cent. per annum . \$20,000 00

The interest on which is to be annually devoted to the maintenance of a Free Public Library.

Mr. Phillips died on the 29th of July, 1860, at the age of 82; the latter sum was realized by the city in April, 1861.

PIERCE FUND.—This is a donation made by HENRY L. PIERCE, formerly Mayor of the city, November 29, 1873, and accepted by the City Council December 27, 1873.

Invested in one certificate of indebtedness of City of Boston,
 due January 1, 1924, interest at four per cent. per annum, \$5,000 00

SCHOLFIELD FUND.—Bequest of ARTHUR SCHOLFIELD, of \$50,000, who died in New York, January 17, 1883, who provided that upon the death of certain heirs the interest was to be used for the purchase of books of permanent value. His last heir, Joseph Scholfield, died November 18, 1889, and by his will bequeathed to the City of Boston the sum of \$11,766.67, which represents the income of said fund received by him up to the time of his death, to be added to the fund bequeathed by his brother and which, with the interest accumulated thereon, was invested in a certificate of indebtedness of the City of Boston for \$11,800.

The fund is now invested in certificates of indebtedness of the City of Boston, bearing interest and maturing as follows :

One due October 1, 1913, four per cent. per annum . .	\$50,000 00
One due July 1, 1920, four per cent. per annum . .	11,800 00
	<u>\$61,800 00</u>

SOUTH BOSTON BRANCH LIBRARY FUND.—Donation of a citizen of South Boston, the income of which is to be expended for the benefit of the South Boston Branch Library.

Invested in one certificate of indebtedness of City of Boston, due July 1, 1919, interest at four per cent. per annum .	<u>\$100 00</u>
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TICKNOR FUND.—By the will of GEORGE TICKNOR of Boston, he bequeathed to the City of Boston all his books and manuscripts in the Spanish and Portuguese languages, about four thousand volumes, and also the sum of four thousand dollars. The city is required to spend not less than one thousand dollars in every five years during the twenty-five years next succeeding (*i.e.*, the income of four thousand dollars, at the rate of five per cent. per annum), in the purchase of books in the Spanish and Portuguese languages and literature. At the end of twenty-five years the income of said sum is to be expended annually in the purchase of books of permanent value, either in the Spanish or Portuguese languages, or in such other languages as may be deemed expedient by those having charge of the library. The books bequeathed or purchased are always to be freely accessible for reference or study, but are not to be loaned for use outside of the library building.

Invested in one certificate of indebtedness of City of Boston, due October 1, 1920, interest at four per cent. per annum,	<u>\$4,000 00</u>
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TODD FUND.—Donation of WILLIAM C. TODD of Atkinson, New Hampshire, to be held in trust, the income only thereof to be expended for the purchase of such current newspapers of this and other countries as the board or officers for the time being having charge of the Public Library of the City of Boston, shall deem proper.

Invested in one certificate of indebtedness of City of Boston, due October 1, 1927, interest at four per cent. per annum,	<u>\$50,000 00</u>
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TOWNSEND FUND.—This is a donation from William Minot and William Minot, Jr., executors of the will of MARY P. TOWNSEND, of Boston, at whose disposal she left a certain portion of her estate in trust, for such charitable and public institutions as they might think meritorious. Said executors accordingly selected the Public Library of the City of Boston as one of such institutions, and attached the following conditions to the legacy: "The income only shall, in each and every year, be expended in the purchase of books for the use of the library; each of which books shall have been published in some one edition at least five years at the time it may be so purchased."

Invested in one certificate of indebtedness of City of Boston, due April 1, 1899, interest at five per cent. per annum .	<u>\$4,000 00</u>
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TREADWELL FUND.—By the will of DANIEL TREADWELL, of Cambridge, late Rumford Professor in Harvard College, who died February 27, 1872, he left the residue of his estate, after payment of debts, legacies, etc., in trust to his executors, to hold during the life of his wife for her benefit, and after her decease to divide the residue then remaining in the hands of the trustees as therein provided, and convey one-fifth part thereof to the Trustees of the Public Library in the City of Boston. The income of which is to be expended by said trustees in such manner as they may deem for the best interests of the Library.

Invested in certificates of indebtedness of City of Boston, bearing interest and maturing as follows:

One due January	1, 1916, four per cent. per annum . .	\$500 00
One due April	1, 1916, four per cent. per annum . .	2,000 00
One due October	1, 1917, four per cent. per annum . .	1,700 00
One due November	15, 1919, three and one-half per cent. per annum . .	1,400 00
One due October	1, 1921, four per cent. per annum . .	1,000 00
One due October	1, 1923, four per cent. per annum . .	350 00
		<u>\$6,950 00</u>

Also—

16 shares Boston & Albany Railroad Corporation . .	2,785 00
6 shares Boston & Providence Railroad Corporation . .	1,077 00
12 shares Fitchburg Railroad Corporation preferred stock . .	1,062 00
1 share Vermont & Massachusetts Railroad Corporation . .	133 00
	<u>\$12,007 00</u>
Cash in City Treasury	37 69
	<u>\$12,044 69</u>

TWENTIETH REGIMENT MEMORIAL FUND.—Donation of the Twentieth Regiment Association, to establish a Public Library Trust Fund to be known as the "Twentieth Regiment Memorial Fund," the income of which to be used for the purchase of books of a military and patriotic character to be placed in alcove appropriated as a memorial of the Twentieth Regiment.

Invested in one certificate of indebtedness of City of Boston,
due October 1, 1917, interest at four per cent. per annum, \$5,000 00

RECAPITULATION PUBLIC LIBRARY TRUST FUNDS.

Artz Fund	\$10,000 00
Bates Fund	50,000 00
Bigelow Fund	1,000 00
Bowditch Fund	10,000 00
Bradlee Fund	1,000 00
Franklin Club Fund	1,000 00
Green Fund	2,000 00
Charlotte Harris Fund	10,000 00
Thomas B. Harris Fund	1,000 00
Abbott Lawrence Fund	10,000 00
Edward Lawrence Fund	500 00
Charles G. Loring Memorial Fund	500 00
Charles G. Mead Fund	2,500 00
O'Reilly Memorial Fund	1,000 00
Phillips Funds	30,000 00
Pierce Fund	5,000 00
Scholfield Fund	61,800 00
South Boston Branch Library Trust Fund	100 00
Ticknor Fund	4,000 00
Todd Fund	50,000 00
Townsend Fund	4,000 00
Treadwell Fund	12,044 69
Twentieth Regiment Memorial Fund	5,000 00
	<u>\$272,444 69</u>

GEORGE L. RANDIDGE FUND.

This is a bequest of the late GEORGE L. RANDIDGE and received from George E. Hale and Alfred D. Foster trustees of his estate, June 26, 1896, the income thereof to be devoted for the sole purpose of affording to the children of the poor of the city of all religious denominations the pleasure of one or more excursions during the months of July and August in each year. Income to be paid as designated by the Mayor.

Invested in one certificate of indebtedness of City of Boston,
due July 1, 1916, interest at four per cent. per annum . \$50,000 00

SAWYER, MARCELLA-STREET HOME FUND.

Bequest of SAMUEL E. SAWYER for the benefit of the "Marcella-Street Home for Poor and Neglected Children," on the condition that the sum be safely invested as a permanent fund, and the income only of said sum be used in such manner as will best promote the interests and prosperity of the institution. Received as follows: \$2,000, December 31, 1895; \$213.94, April 21, 1896, and \$98.40, April 26, 1897. Accepted by City Council by order approved November 30, 1895. Invested in certificates of indebtedness of City of Boston, bearing interest and maturing as follows:

One due January 1, 1916, interest at four per cent. per annum	\$2,000 00
One due January 1, 1918, interest at three and one-half per cent. per annum	300 00
	<u>\$2,300 00</u>
Cash in City Treasury	12 34
	<u>\$2,312 34</u>

SCHOOL FUNDS.

BOWDOIN, DORCHESTER, FUND. — Proceeds from the sale of a woodland estate in Milton, conveyed by Gov. JAMES BOWDOIN to the inhabitants of the Town of Dorchester, invested in

One certificate of indebtedness of City of Boston, due January 1, 1920, interest at four per cent. per annum . . . \$4,500 00

Income to be expended by the School Committee for the benefit of the Public Schools in that part of Boston called Dorchester.

COMINS SCHOOL LIBRARY FUND. — Donation of LINUS B. COMINS, the interest of which is to be expended upon the library of the "Comins Grammar School for Girls," and to be held in trust by the Chairman of the School Committee, the Mayor of the City, and the President of the Common Council, who are constituted, *ex officio*, Trustees of the Fund.

Invested in one certificate of indebtedness of City of Boston,
due April 1, 1899, interest at five per cent. per annum . \$500 00

EASTBURN FUND. — This is a bequest from JOHN H. EASTBURN and received from the executors of his estate in April, 1886.

The following clause from his will explains the purpose of the bequest:

"The interest to be applied to aid and assist deserving and poor scholars to finish their education, by pecuniary assistance, in the Normal School for Females."

Invested in one certificate of indebtedness of City of Boston,
due April 1, 1916, interest at four per cent. per annum . \$10,000 00

FRANKLIN MEDAL FUND.—This is a legacy by Dr. BENJAMIN FRANKLIN in 1791, the interest on which, since 1792, has been invested in silver medals, which are now distributed at the annual examinations, among the most deserving boys in the ENGLISH HIGH AND LATIN SCHOOLS.

Invested in one certificate of indebtedness of City of Boston,
due April 1, 1900, interest at five per cent. per annum . \$1,000 00

Income unexpended, cash in the Globe National Bank . \$200 02

GIBSON FUND.—This is the bequest of CHRISTOPHER GIBSON, who provided by will, about 1674, that after the payment of legacies and debts, his executor should “purchase some estate for the promotion of learning in the town of Dorchester.” The surviving executor, Daniel Preston, purchased for £104 twenty-six acres of land at Smelt Brook, and deeded the same, February 6, 1693, to Enoch Wiswell, Samuel Robinson, John Tolman, James Bird, and Increase Sumner, as trustees, and to their successors and assigns, for the “use and purpose, benefit and behoof, of the schools of learning in the town of Dorchester.” Sales have been made from time to time, and a part still remains unsold. The proceeds have been invested in certificates of indebtedness of City of Boston, bearing interest and maturing as follows:

One due January 1, 1901, four per cent. per annum . . .	\$3,000 00
One due January 1, 1901, four per cent. per annum . . .	2,000 00
One due January 1, 1903, four per cent. per annum . . .	1,000 00
One due October 1, 1905, six per cent. per annum . . .	1,000 00
One due April 1, 1908, five per cent. per annum . . .	5,000 00
One due April 1, 1908, five per cent. per annum . . .	1,000 00
One due April 1, 1915, four per cent. per annum . . .	2,500 00
One due July 1, 1917, three and one-half per cent. per annum . . .	37,500 00
One due October 1, 1920, four per cent. per annum . . .	2,000 00
One due October 1, 1920, four per cent. per annum . . .	1,000 00
One due October 1, 1923, four per cent. per annum . . .	425 00

\$56,425 00

Cash in City Treasury 79

\$56,425 79

LATIN SCHOOL PRIZE FUND.—This is a donation from a number of gentlemen in Boston, in the year 1819, the interest of which is invested in prizes, which are annually distributed among the most deserving scholars in the PUBLIC LATIN SCHOOL.

Invested in one certificate of indebtedness of City of Boston,
due January 1, 1906, interest at six per cent. per annum . \$1,050 00

LAWRENCE HIGH SCHOOL FUND.—This is a donation made by ABBOTT LAWRENCE, of Boston, in the year 1844, the interest of which is payable annually to the Sub-Committee of the ENGLISH HIGH SCHOOL, for the time being; and is by them distributed in prizes for the best performance in various branches of literature and science in that institution; and in such other rewards to the scholars in the school as that committee shall recommend.

Invested in one certificate of indebtedness of City of Boston,
due January 1, 1906, interest at six per cent. per annum . \$2,000 00

LAWRENCE LATIN SCHOOL FUND.—This is a donation made by ABBOTT LAWRENCE, in the year 1845, the interest of which is payable annually to the “Chairman of the Sub-Committee of PUBLIC LATIN

SCHOOL, for the time being," and is distributed in prizes for the general encouragement of the scholars in such a way as the sub-committee of that school shall consider advisable.

Invested in one certificate of indebtedness of City of Boston,
due January 1, 1906, interest at six per cent. per annum . . . \$2,000 00

MILMORE BRIMMER SCHOOL FUND.—Bequest of MARTIN MILMORE, the income from which to aid in clothing the poor children of the Brimmer School.

Invested in one certificate of indebtedness of City of Boston,
due April 1, 1914, interest at four per cent. per annum . . . \$500 00

NORCROSS SCHOOL LIBRARY FUND.—Donation and bequest of OTIS NORCROSS, formerly Mayor of Boston. The income from this fund is to be paid to the master of the "Norcross School," to be expended in books for a library of the first class of said school. Invested in certificates of indebtedness of City of Boston, maturing and bearing interest as follows :

One due October 1, 1902, four per cent. per annum . . .	\$500 00
One due October 1, 1917, four per cent. per annum . . .	500 00
	<u>\$1,000 00</u>

SAWYER, HORACE MANN SCHOOL FUND.—Bequest of SAMUEL E. SAWYER for the benefit of the "Horace Mann School for Deaf and Dumb," on condition that the sum be safely invested as a permanent fund, and the income only of said sum be used in such manner as will best promote the interests and prosperity of the institution. Accepted by City Council by order approved November 30, 1895. Received \$2,000 December 31, 1895; \$213.94 April 21, 1896, and \$98.40 April 26, 1897. Invested in certificates of indebtedness of City of Boston, bearing interest and maturing as follows:

One due January 1, 1916, interest at four per cent. per annum . . .	\$2,000 00
One due January 1, 1918, interest at three and one-half per cent. per annum . . .	300 00
	<u>\$2,300 00</u>
Cash in City Treasury . . .	12 34
	<u>\$2,312 34</u>

SMITH FUND.—This was a legacy of ABIEL SMITH of Boston, who died in 1817, to the SELECTMEN OF THE TOWN OF BOSTON for the time being.

The income from this fund is appropriated towards the expense of "the Free Instruction of COLORED CHILDREN in Reading, Writing and Arithmetic." Invested in certificates of indebtedness of City of Boston, bearing interest, and maturing as follows:

One due April 1, 1900, five per cent. per annum . . .	\$4,000 00
One due April 1, 1915, four per cent. per annum . . .	4,400 00
One due July 1, 1919, four per cent. per annum . . .	200 00
	<u>\$8,600 00</u>

STOUGHTON FUND.—This is a bequest of Gov. WILLIAM STOUGHTON, who died at Dorchester, July 7, 1701, and gave to the schools of Dorchester one hundred and fifty pounds, "for the advancement of a salary of a school-master."

The terms of this bequest were complied with by the authorities of the Town of Dorchester. This fund was received from the Treasurer of the Town of Dorchester by the terms of the act of annexation of said town to Boston, and stands as follows:

Invested in one certificate of indebtedness of City of Boston, due April 1, 1915, interest at four per cent. per annum \$5,300 00

The income of the fund is paid to the City Treasurer, and credited annually to salaries of school instructors.

WEBB FRANKLIN SCHOOL FUND.—This is a legacy made in the year 1828, by RUFUS WEBB, formerly writing master in one of the public schools.

The income from this fund is applied to the purchase of books, etc., for the use of indigent scholars in the writing department of the Franklin School.

Invested in one certificate of indebtedness of City of Boston, due April 1, 1905, interest at six per cent. per annum. \$1,000 00

RECAPITULATION OF SCHOOL TRUST FUNDS.

Bowdoin Dorchester Fund	\$4,500 00
Comins School Library Fund	500 00
Eastburn Fund	10,000 00
Franklin Medal Fund	1,000 00
Gibson Fund	56,425 79
Latin School Prize Fund	1,050 00
Lawrence High School Fund	2,000 00
Lawrence Latin School Fund	2,000 00
Milmore Brimmer School Fund	500 00
Norcross School Library Fund	1,000 00
Sawyer, Horace Mann School Fund	2,312 34
Smith Fund	8,600 00
Stoughton Fund	5,300 00
Webb Franklin School Fund	1,000 00
	<u>\$96,188 13</u>

RECAPITULATION OF TRUST FUNDS IN CUSTODY OF CITY TREASURER.

Babcock Music	\$3,000 00
City Hospital	150,098 07
Dorchester South Cemetery	400 00
Evergreen Cemetery	4,100 00
Foss Seventeenth of June, and Flag	4,000 00
Franklin Trades School	355,004 68
George B. Hyde	9,382 80
Mount Hope Cemetery	57,152 82
Phillips Street	20,000 00
Police Charitable	207,550 00
Poor Widows'	3,200 00
Public Library	272,444 69
George L. Randidge	50,000 00
Sawyer, Marcella-Street Home School	2,312 34
	96,188 13
Total.	<u>\$1,234,833 53</u>



ANNUAL REPORT
OF THE
WATER DEPARTMENT

FOR THE YEAR ENDING JANUARY 31, 1898.

OFFICE OF THE WATER COMMISSIONER,
CITY HALL, BOSTON, February 1, 1898.

HON. JOSIAH QUINCY, *Mayor* :

SIR: I submit a report of the doings of the Water Department for the year ending January 31, 1898.

The net income of the department shows an increase over last year, and the net debt a marked decrease.

In addition to the general detail work of the department 28.2 miles of main pipe have been laid, seven miles of which were relaid.

The many improvements in progress in the city, such as the South Union Station, Subway, Stony brook improvement and grade crossings, have made the department work of a very difficult nature. The taking of a portion of the yard of our Distribution Division has so curtailed our storage capacity as to increase the difficulties and the cost of handling our pipe. This together with the ever-increasing necessity of doing work on Sundays and at night, in order that the public may be least inconvenienced in the crowded portions of the city, is each year adding to the cost of our work, especially in the city proper.

The original pipes, laid fifty years ago, when the Cochituate system was introduced into Boston, are not in some

localities large enough to give the proper supply of water, and in others have deteriorated in strength to such an extent as to necessitate their being taken up and new pipes of a larger diameter laid in their places. The department has had a great deal of this work for the last two years, and will have more in the future. This means heavy expenditures and increased cost in maintenance.

In the outlying sections of the city the number of buildings erected has been phenomenal, necessitating the laying of a large number of new mains and service pipes.

The amount of work done by the department is very much in excess of that accomplished in previous years, and it is absolutely necessary that the wharf facilities of the Distribution Division for storing of pipe, etc., be increased at once, in order that the main pipe, stock, etc., can be handled quickly and economically.

The practice of setting service pipes for vacant lands on streets laid out under chapter 323, Acts of 1891, which has heretofore been followed, presents many objectionable features. One of the most serious is the opportunity afforded for waste of water. Some of the services get broken by the settlement of the street, by the road-roller in construction, by electrolysis, etc. Under these conditions, as the pipe is under pressure from the main to the sidewalk, leaks occur which are often not apparent on the surface. In a few years, as the number of services which are not connected to buildings are liable to increase, the number of leaks of this kind must be large and serious. Another objection is the fact that neither the size of the service nor its proper location can be accurately determined in advance. In many cases no lotting of the land has been made, and if made the land may change ownership, involving oftentimes a complete relaying. Under the present methods, in order to provide for every possible service, it has resulted, and will result, in the location of many pipes which will never be used, and which eventually must be a means of waste. It is my intention to change the policy of the department in reference to these service pipes, so as to prevent the faults of the present method of laying them.

The work of extending the salt-water mains for the Fire Department is progressing very satisfactorily.

In the nigh future it is possible to somewhat curtail the expenses of the department by shutting down some of the smaller pumping-stations. This will be made possible by the completion of the laying of large mains upon which the department is at work at the present time.

The organization of the department has been practically completed. The method of keeping the general accounts, reporting on the work, etc., applied last year to Districts 1, 2 and 3, are in use in District 4 and the Meter Division. The lack of any correct accounts in the Meter Division has made this change a very difficult one. With the coming year, I am of the opinion that the method of keeping the accounts in all the divisions will be more than satisfactory. The report of the expert accountant engaged to examine our accounts is to the effect that the books and accounts are kept correctly.

The Meter Division has been transferred from what was formerly known as the Eastern Division to the Income Division. By this change all matters pertaining to income are part of the Income Division, and all matters pertaining to supply remain with the Distribution Division (formerly Eastern Division).

On January 1, 1898, the Metropolitan Water Board made a taking of the sources of supply of our department outside the limits of Boston. The taking includes all the property of the department (including basins, aqueducts, mains, etc.) outside the territorial limits of Boston, except the Fisher Hill Reservoir, the old Brookline Reservoir, their connections, and some mains in the immediate vicinity of Boston, but not within her limits. The division of the department formerly known as the Eastern is now known as the Distribution Division. The Western Division has been done away with. Boston no longer supplies Somerville, Chelsea and Everett with water. The receipts from income during January were somewhat less, because of our ceasing to supply these cities; and for the same reason during the coming year the receipts will be materially less than for the year just ended.

The purity of the water has been maintained by constant inspection and attention. The work of the Deacon meter service in the detection of waste has been conscientiously carried on; but Boston is meeting the same difficulty that is met with in other cities, viz., an increased consumption brought about partially by waste, but in part by the increased demands made by the modern methods of living.

The department has paid particular attention to electrolysis, and under the head of the City Engineer's report will be found the facts in detail.

The demands for new work during the coming year will, of necessity, be larger than during the past. With your approval the practice inaugurated in previous years of paying for work under chapter 177, Acts of 1872, has been aban-

done, and all expenditures of the department will be paid for out of the regular appropriation. In addition to the extension of mains and the relaying of old pipe, it will be necessary this year to lay a 12-inch main from Neponset, through Quincy, to Moon Island, in order to properly supply Long Island and the various islands and fortifications in the harbor with water. The present 6-inch pipe is totally inadequate. It will also be necessary to lay an additional pipe under Shirley Gut to Deer Island, and an additional pipe across Chelsea creek to East Boston, as one of the mains has become so weakened by age as to become totally useless.

The receipts and disbursements of the department for the year were as follows :

Total receipts of the Water Works, from all sources, for the year ending January 31, 1898 :

Income from sales of water	\$2,590,496 89	
Income from shutting off and letting on water and fees	6,051 72	
Elevator, fire and service pipes, sale of old materials, etc..	60,328 61	
Total receipts	\$2,656,877 22	
Less refunded water-rates	1,892 18	
Net receipts		<u>\$2,654,985 04</u>

Total expenditures of the Water Works, from revenue, for the year ending January 31, 1898 :

*Current expenses	\$623,476 51
Interest on funded debt	887,638 02
Sinking-fund requirement, 1896-97	193,395 00
† Extension of mains, etc.	281,782 32
Amount paid Chelsea, Somerville and Everett, under contracts	180,222 94
Damages	4,910 75
Balance to general revenue account of city	483,559 50
	<u>\$2,654,985 04</u>

COST OF CONSTRUCTION, AND CONDITION OF THE WATER DEBT.

Cost of construction of Water Works to February 1, 1897	\$26,414,817 32
Cost of construction of Water Works to February 1, 1898	26,831,753 14
Increase during the year	<u>\$416,935 82</u>
Stock on hand February 1, 1897	\$99,885 22
Stock on hand February 1, 1898	152,665 07
Increase during the year	<u>\$52,779 85</u>

The outstanding Water Loans February 1, 1897 were	\$18,261,273 98
The outstanding Water Loans February 1, 1898 were	17,911,273 98
Decrease during the year	<u>\$350,000 00</u>
The Water Sinking-Fund February 1, 1897 was	\$8,704,387 99
The Water Sinking-Fund February 1, 1898 was	9,852,760 01
Increase during the year	<u>\$148,372 02</u>
Net Water Debt February 1, 1897	\$8,556,885 99
Net Water Debt February 1, 1898	8,058,513 97
Decrease during the year	<u>\$498,372 02</u>

SUMMARY OF COST OF WORKS TO FEBRUARY 1, 1898.

Cochituate supply :

Lake Cochituate	\$291,838 35
Compensating reservoirs	66,859 80
Land and water damages	248,827 34
Engineering expenses to Jan- uary 1, 1852	40,000 00
Cochituate aqueduct	1,068,425 24
	<u>\$1,715,950 73</u>

Sudbury supply :

Reservoir No. 1	\$257,143 81
“ “ 2	465,954 11
“ “ 3	419,402 72
“ “ 4	813,846 38
“ “ 5, to date	1,114,752 43
“ “ 6	911,752 33
Whitehall pond	330,975 46
Cedar swamp	33,599 21
Work about Farm pond	17,297 94
Roadway in Framingham	23,947 32
Land damages, not otherwise specified	348,346 38
Water damages	559,190 64
Temporary connection with Lake Cochituate	75,611 73
Investigations of Shawshine and Charles rivers, etc.	27,646 59
Protection of supplies	363,883 32
Engineering and engineering expenses	300,371 22
Office expenses, travelling, etc.	80,594 74
Miscellaneous	40,388 76
Conduit and connections at Chestnut-Hill Reservoir	3,082,661 95
	<u>9,267,367 04</u>

Carried forward,\$10,983,317 77

<i>Brought forward,</i>		\$10,983,317 77
Distributing reservoirs and distribution:		
Brookline Reservoir . . .	\$200,077 21	
Beacon-Hill " (net cost) . . .	363,533 21	
Chestnut-Hill " . . .	2,277,042 93	
South Boston " . . .	90,908 10	
East " " . . .	66,103 09	
Parker-Hill " . . .	205,793 81	
Fisher-Hill " . . .	191,135 35	
Roxbury high service . . .	103,829 53	
Brighton " " . . .	7,745 00	
East Boston high service . . .	30,208 12	
West Roxbury high service . . .	22,346 56	
Chestnut-Hill pumping-station . . .	525,195 46	
Jamaica-pond aqueduct . . .	88,417 20	
Pipe-yards and buildings . . .	94,832 16	
Engineering expenses . . .	57,873 58	
Distribution . . .	10,871,844 18	
		15,196,885 49

Total cost of Sudbury and Cochituate Works, \$26,180,203 26

Cost of Mystic Works to February 1, 1898 :		
Land damages	\$153,211 63	
Dam	\$17,167 26	
Grubbing at lake	9,393 26	
Lowering Mystic river	3,012 06	
		29,572 58
Conduit		129,714 30
Engine-house	\$83,388 75	
Engines	213,834 72	
		297,223 47
Reservoir		141,856 26
Distribution		874,863 58
Buildings		18,603 05
Engineering, inspection and salaries		53,216 27
Mystic-valley sewer		83,608 70
Miscellaneous		24,446 88
Total cost of Mystic Works,		\$1,806,316 72
Total cost of combined supplies	\$27,986,519 98	
Credit by amount received from the State on account of taking (January 4, 1896)	1,154,766 84	
		\$26,831,753 14

WATER DEPARTMENT.

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The outstanding Water Loans on this date, February 1, 1898, are as follows :

Loans.			Date of Maturity.	Amount.
6	per cent.	Currency,	Due June, 1898 . . .	\$450,000 00
6	" "	"	" Oct., 1898 . . .	540,000 00
6	" "	"	" April, 1899 . . .	250,000 00
6	" "	"	" Jan., 1901 . . .	625,000 00
6	" "	"	" April, 1901 . . .	688,000 00
6	" "	"	" July, 1901 . . .	330,000 00
6	" "	"	" July, 1902 . . .	100,000 00
5	" "	Sterling Loan, (£399,500)	" Oct., 1902 . . .	1,947,273 98
6	" "	Currency,	" April, 1903 . . .	905,000 00
6	" "	"	" Jan., 1904 . . .	8,000 00
6	" "	"	" April, 1904 . . .	38,000 00
6	" "	"	" Jan., 1905 . . .	161,000 00
6	" "	"	" April, 1905 . . .	142,700 00
6	" "	"	" July, 1905 . . .	44,000 00
6	" "	"	" Oct., 1905 . . .	6,000 00
5	" "	Gold Loan,	" Oct., 1905 . . .	1,000,000 00
6	" "	Currency,	" Jan., 1906 . . .	82,550 00
6	" "	"	" April, 1906 . . .	8,750 00
5	" "	Gold Loan,	" April, 1906 . . .	552,000 00
5	" "	"	" Oct., 1906 . . .	2,000,000 00
6	" "	Currency,	" Oct., 1906 . . .	4,000 00
6	" "	"	" Jan., 1907 . . .	8,000 00
6	" "	"	" April, 1907 . . .	5,000 00
6	" "	"	" July, 1907 . . .	1,000 00
5	" "	Currency Loan,	" Oct., 1907 . . .	1,000 00
5	" "	"	" April, 1908 . . .	12,000 00
4	" "	"	" April, 1908 . . .	588,000 00
4	" "	Loan,	" July, 1909 . . .	82,000 00
4½	" "	"	" Oct., 1909 . . .	268,000 00
4	" "	"	" April, 1910 . . .	280,000 00
4	" "	"	" April, 1912 . . .	324,000 00
4	" "	"	" July, 1913 . . .	111,000 00
4	" "	"	" Oct., 1913 . . .	336,000 00
4	" "	"	" Jan., 1914 . . .	466,000 00
4	" "	"	" April, 1914 . . .	18,500 00
4	" "	"	" Oct., 1914 . . .	16,000 00
4	" "	"	" Jan., 1915 . . .	50,000 00
3½	" "	"	" April, 1915 . . .	50,000 00
4	" "	"	" April, 1915 . . .	145,700 00
3½	" "	"	" Oct., 1915 . . .	50,000 00
4	" "	"	" Oct., 1915 . . .	23,000 00
3½	" "	"	" Jan., 1916 . . .	100,000 00
4	" "	"	" Jan., 1916 . . .	58,000 00
4	" "	"	" April, 1916 . . .	128,500 00
3½	" "	"	" July, 1916 . . .	75,000 00
3½	" "	"	" Oct., 1916 . . .	25,000 00
4	" "	"	" Oct., 1916 . . .	286,300 00
4	" "	"	" Jan., 1917 . . .	21,000 00
3	" "	"	" April, 1917 . . .	200,000 00
3½	" "	"	" April, 1917 . . .	275,000 00
4	" "	"	" April, 1917 . . .	161,000 00
4	" "	"	" July, 1917 . . .	7,000 00
4	" "	"	" Oct., 1917 . . .	160,700 00
4	" "	"	" Jan., 1918 . . .	20,000 00
4	" "	"	" April, 1918 . . .	6,300 00

Carried forward,

\$14,241,273 98

Loans.			Date of Maturity.	Amount.
<i>Brought forward,</i>				\$14,241,273 98
3 $\frac{1}{2}$	per cent.	Loan,	Due July, 1918 . . .	100,000 00
4	"	"	" Oct., 1918 . . .	100,000 00
4	"	"	" April, 1919 . . .	200,000 00
3 $\frac{1}{2}$	"	"	" Oct., 1919 . . .	145,000 00
4	"	"	" Oct., 1919 . . .	300,000 00
3 $\frac{1}{2}$	"	"	" Nov., 1919 . . .	130,000 00
3 $\frac{1}{2}$	"	"	" Jan., 1920 . . .	220,000 00
4	"	"	" Oct., 1920 . . .	384,000 00
4	"	"	" April, 1921 . . .	100,000 00
4	"	"	" Oct., 1921 . . .	162,500 00
4	"	"	" Jan., 1922 . . .	100,000 00
4	"	"	" April, 1922 . . .	75,000 00
4	"	"	" Oct., 1922 . . .	283,000 00
4	"	"	" Oct., 1923 . . .	576,275 00
4	"	"	" Oct., 1924 . . .	644,225 00
3 $\frac{1}{2}$	"	"	" Oct., 1927 . . .	150,000 00
Total				<u>\$17,911,273 98</u>

SUMMARY.

3	per cent.	Loans	\$200,000 00
3 $\frac{1}{2}$	"	"	1,320,000 00
4	"	"	6,214,000 00
4 $\frac{1}{2}$	"	"	268,000 00
5	"	Currency Loans	13,000 00
5	"	Gold "	3,552,000 00
5	"	Sterling "	1,947,273 98
6	"	Loans	4,397,000 00
Total			<u>\$17,911,273 98</u>

Cochituate Water Debt, Gross and Net,

At the Close of Each Fiscal Year.

Fiscal Year.	Gross Debt.	Sinking-Funds.	Net Debt.
1847-48	\$2,129,056 32 ¹	.....	\$2,129,056 32
1848-49	3,787,328 98	.....	3,787,328 98
1849-50	4,463,205 56	.....	4,463,205 56
1850-51	4,955,613 51	.....	4,955,613 51
1851-52	5,209,223 26	.....	5,209,223 26
1852-53	5,972,976 11	.....	5,972,976 11
1853-54	5,432,261 11	.....	5,432,261 11
1854-55	5,403,961 11	.....	5,403,961 11
1855-56	5,230,961 11	.....	5,230,961 11
1856-57	5,031,961 11	.....	5,031,961 11
1857-58	4,724,961 11	.....	4,724,961 11
1858-59	4,754,461 11	.....	4,754,461 11
1859-60	3,846,211 11	.....	3,846,211 11
1860-61	3,455,211 11	.....	3,455,211 11
1861-62	3,012,711 11	.....	3,012,711 11
1862-63	2,992,711 11	.....	2,992,711 11
1863-64	2,992,711 11	.....	2,992,711 11
1864-65	2,942,711 11	.....	2,942,711 11
1865-66	3,152,711 11	.....	3,152,711 11
1866-67	3,370,711 11	.....	3,370,711 11
1867-68	3,867,711 11	.....	3,867,711 11
1868-69	5,107,711 11	.....	5,107,711 11
1869-70	5,731,711 11	.....	5,731,711 11
1870-71	6,482,711 11	\$1,100,000 00	5,382,711 11
1871-72	6,812,711 11	1,185,049 67	5,627,661 44
1872-73	6,912,711 11	1,268,234 97	5,644,476 14
1873-74	7,863,711 11	1,372,953 62	6,490,757 49
1874-75	8,123,711 11	1,533,890 28	6,589,820 83
1875-76	9,735,711 11	1,560,917 83	8,174,793 28
1876-77	11,548,711 11	1,709,492 60	9,839,218 51
1877-78	11,545,273 98	2,043,764 73	9,501,509 25
1878-79	11,753,273 98	2,143,847 85	9,609,426 13
1879-80	11,697,273 98	1,771,692 92	9,925,581 06
1880-81	11,631,273 98	1,989,300 88	9,641,973 10
1881-82	11,631,273 98	2,281,857 89	9,349,416 09
1882-83	11,955,273 98	2,607,768 46	9,347,505 52
1883-84	12,882,273 98	2,746,505 58	10,135,768 40
1884-85	13,045,473 98	3,106,323 82	9,939,150 16
1885-86	13,491,473 98	3,385,201 26	10,106,272 72
1886-87	14,142,273 98	3,947,616 92	10,194,657 06
1887-88	14,741,273 98	4,373,304 09	10,367,969 89
1888-89	14,941,273 98	4,864,092 54	10,077,181 44
1889-90	15,696,273 98	5,440,819 47	10,255,454 51
1890-91	16,267,773 98	5,979,297 80	10,288,476 18
1891-92	16,423,773 98	6,471,545 34	9,952,228 64
1892-93	16,758,773 98	7,019,058 38	9,739,715 60
1893-94	17,055,273 98	7,649,504 87	9,405,769 11
1894-95	17,761,273 98	8,444,773 55	9,316,500 43
1895-96	18,261,273 98	9,099,966 39	9,161,307 59
1896-97	18,261,273 98	9,704,387 99	8,556,885 99
1897-98	17,911,273 98	9,852,760 01	8,058,513 97

¹ No account taken of amounts borrowed temporarily from 1846 to 1852 and afterwards funded by the issue of the water bonds that figure in this statement.

Cochituate Water Sinking-Fund Receipts.

[SINCE THE ESTABLISHMENT OF THE BOARD OF SINKING-FUND COMMISSIONERS IN 1871.]

YEAR.	From Tax Levy or City Income.	Interest on Investments.	Interest on Bank Deposits.	Water- Rates, etc.	Premiums on Loans.	Other Sources.	Totals.
1871. April 30, received from Committee on Re- duction of Debt	\$1,100,000 00						\$1,100,000 00
1871-72.....	14,325 00 Taxes, 9,375 00	\$61,000 00	\$349 67				85,049 67
1872-73.....	9,000 00	70,137 50	1,017 80				80,155 30
1873-74.....	30,090 00	76,799 60	2,072 65				108,962 25
1874-75.....	75,973 28	82,842 25	2,121 13				160,936 66
1875-76.....	65,554 00	85,470 00	3,617 55			\$386 00	155,027 55
1876-77.....	234,814 00	86,245 66	4,119 47	\$26,480 18		915 46	352,574 77
1877-78.....	Taxes, 214,500 00	85,830 85	10,809 31	27,099 92			338,240 08
1878-79.....	Taxes, 207,456 00	93,264 49	6,181 26	177,195 91		9,874 21	493,971 87
1879-80.....		90,472 42	5,687 62	214,707 24		4,411 64	315,278 92
1880-81.....		86,460 00	167 32	195,668 90		1,702 04	284,058 26
1881-82.....		96,546 35	2,767 90	193,840 36		494 08	293,648 69

WATER DEPARTMENT.

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1882-83.		105,129 51	8,486 33	219,581 72		1,241 04	331,438 60
1883-84.	Taxes, 973 00	138,120 90	2,268 22				141,362 12
1884-85.	.....	143,049 45	7,510 40	209,258 39	.....	.....	359,818 24
1885-86.	.....	156,694 01	5,804 31	120,129 12	.....	442 27	283,069 71
1886-87.	Taxes, 75,496 00	181,264 89	2,644 70	297,928 95	.....	5,081 12	562,415 66
1887-88.	.....	199,883 90	4,178 16	221,620 11	.....	.....	425,682 17
1888-89.	.....	213,048 22	8,958 69	256,013 57	\$11,552 50	.....	489,572 98
1889-90.	.....	228,000 83	11,730 60	300,903 00	36,092 50	.....	576,726 93
1890-91.	.....	229,509 17	29,763 94	242,675 22	36,530 00	.....	538,478 33
1891-92.	.....	175,808 33	22,560 16	275,014 05	.....	78,865 00	552,247 54
1892-93.	.....	260,506 20	30,148 34	240,435 00	16,413 50	.....	547,503 04
1893-94.	.....	298,224 44	18,133 03	299,467 27	14,621 75	.....	630,446 49
1894-95.	.....	312,332 05	18,524 22	297,518 29	.....	9,894 12	638,268 68
1895-96.	.....	378,819 55	5,892 29	205,791 00	64,690 00	.....	655,192 84
1896-97.	.....	403,840 02	5,225 08	194,740 00	.....	616 50	604,421 60
1897-98.	.....	421,928 45	8,337 21	193,395 00	8,833 50	15,877 86	648,372 02
.....		\$2,037,556 28	\$229,077 36	\$4,406,463 20	\$188,733 75	\$129,861 34	\$11,752,920 97

DETAILED EXPENDITURES UNDER THE SEVERAL APPROPRIATIONS.

FEBRUARY DRAFT, 1897, TO FEBRUARY DRAFT, 1898.

Water Department (from Revenue).

Salaries :		
Commissioner	\$5,000 00	
Assistant Commissioner	3,000 00	
Secretary	3,000 00	
Employees	455,621 56	
		\$466,621 56
Fuel		25,309 38
Machinery, tools, hardware, iron, steel and other materials for repairs and furnishing		23,698 10
Altering and repairing reservoirs, buildings and streets		17,980 48
Horses, purchase of	\$1,135 00	
Feed and board	5,704 94	
Shoeing and veterinary services, ...	3,120 66	
Wagons, sleigh and repairs of vehicles	3,994 65	
Harnesses and repairs	1,311 24	
		15,266 49
Transportation of employees		11,388 14
Castings		11,325 05
Alterations of Albany-street stable		10,746 54
Meters and repairs		9,628 16
Printing		5,259 51
Taxes		3,231 11
Cartage and freights		3,039 08
Lead and lead pipe		2,759 85
Telephone service		2,408 86
Stationery		2,161 31
Examination of property to be taken by the State, and report on same		2,000 00
Grounds, care, seeds, trees and tools		1,538 73
Four meter books		1,500 00
Oils		1,444 77
Expert services		1,356 87
Salt		1,180 71
Rents		1,001 00
Widow of Charles L. Bancroft, balance of sal- ary for 1896 (order of City Council, April 13, 1897)		821 33
Insulating water-pipes		800 00
Board of injured man		782 17
<i>Carried forward</i>		\$623,249 20

<i>Brought forward</i>	\$623,249 20
Compiling and indexing statutes relating to Boston water supply	700 00
Insurance on boilers	650 00
Inspector of castings at foundry	644 60
Gas	519 81
Advertising	496 84
Furniture	491 51
Salt hay	400 04
Examination of accounts	350 00
Analyses of water	325 00
Water-proof clothing	234 85
Blasting trenches	93 15
Electric lighting	36 26
Typewriting and small items	13 26
	\$628,204 52
Less amount transferred to additional supply of water	4,728 01
	\$623,476 51
Refunded water-rates	1,892 18
Sinking-Fund payment	193,395 00
Interest on loans (including exchange on London where part of interest is payable)	887,638 02
Proportion of water-rates paid under contract	180,222 94
Damages	4,910 75
	<u>\$1,891,535 40</u>

From the above amount \$623,476.51 should be deducted \$11,-801.25 expended for work for outside corporations, etc., during the year, leaving the amount of \$611,675.26 as the actual current expenses of the Water Department.

EXTENSION OF MAINS, ETC. (FROM REVENUE).

Labor	\$139,542 54
Castings, pipes, stop-cocks, gates and hydrant frames	117,322 65
Lead and lead pipe	16,244 34
Blasting trenches	11,252 28
Tools, hardware and supplies	8,446 92
Travelling expenses	8,260 15
Repairs	7,535 04
Teaming and freights	6,431 76
Lumber	4,018 73
Inspector of castings at foundry	1,432 82
<i>Carried forward</i>	\$320,487 23

<i>Brought forward</i>	\$320,487 23
Oil	334 87
Fuel	214 16
	\$321,036 26
Less transferred to additional supply of water,	39,253 94
	<u>\$281,782 32</u>

From this amount should be deducted the sum of \$1,499.48 expended for work for outside corporations, etc., during the year, leaving the amount of \$280,282.84 as the actual expenditure for Extension of Mains.

Additional Supply of Water (from Loans).

General:

Land	\$30,589 82	
Engineering	1,735 38	
Expert services	1,701 36	
Examinations of titles and small items	258 28	
Damage for flowing land	135 18	
		\$34,420 02

Indian brook:

Labor	\$7,303 77	
Teaming	438 25	
Tools, hardware and supplies	235 94	
Lumber and carpentry	215 25	
Right of way through private land	100 00	
Board of men	66 70	
Engineering expenses	29 99	
		8,389 90

Whitehall pond:

Labor	\$1,345 08	
Pile-driving	2,019 35	
Lumber and carpentry	1,819 92	
Teaming	1,011 31	
Alteration of coffer-dam	552 50	
Town of Hopkinton, building fence and grading	405 80	
Masonry	344 00	
Tools, hardware and supplies	301 15	
Engineering expenses	198 44	
Board of men	60 00	
		8,057 55
Basin and Dam VI.		76 33
<i>Carried forward</i>		\$50,943 80

<i>Brought forward</i>	.	.	.	.	.	\$50,943 80
<i>New mains, etc.:</i>						
Labor	.	.	.	.	.	\$68,404 58
Castings	.	.	.	.	.	48,922 36
Lead and lead pipe	.	.	.	.	.	7,422 88
Teaming and freights	.	.	.	.	.	3,941 86
Laying new mains	.	.	.	.	.	2,941 26
Blasting trenches	.	.	.	.	.	1,352 67
Lumber	.	.	.	.	.	945 00
Covering submerged pipe	.	.	.	.	.	500 00
Paving and repairs	.	.	.	.	.	451 52
Masonry	.	.	.	.	.	410 01
Filling	.	.	.	.	.	355 07
Tools, hardware and supplies	.	.	.	.	.	249 85
						\$135,897 06
Transferred from-water-works,						4,728 01
Transferred from extension of						
mains, etc.	.	.	.	.	.	39,253 94
						179,879 01
						\$230,822 81

RECAPITULATION.

Water Department	.	.	\$1,891,535 40
Extension of mains, etc.	.	.	281,782 32
Additional supply of water	.	.	230,822 81
			\$2,404,140 53

Contracts Made and Pending during Year commencing February 1, 1897, and ending January 31, 1898.

Contracts marked thus () are completed. Amounts marked thus (†) are for extra work.*

DATE.	CONTRACTORS.	WORK.	AMOUNT.	PAID ON CONTRACT.		
				Previous Years.	Year 1897.	Total.
1896. * Mar. 5,	{ Mechanics' Iron Foundry Company..... }	{ Iron and service-box castings for year ending March 15, 1897, viz., 800,000 lbs. iron increased about 700,000 " " service box, 300,000 " }	{ Total, 1,800,000 lbs. (estimated) } { @ 1 ⁸⁸ / ₁₀₀ cents per lb..... }	\$28,680 43	\$6,021 71	\$34,652 14
* " 9,	{ Pierce F. Loneragan & Co..... }	{ Teaming water-pipes, etc., for year ending March 15, 1897..... }	{ 35 cents per ton (short haul) 2 ¹ / ₂ miles..... }	3,379 50	679 05	4,076 55
* June 26,	Dennis F. O'Connell.....	{ Laying pipes in Boston, Dorchester and Telegraph streets, South Boston, and in Dorchester avenue and Adams street, Dorchester, viz.: 3,400 linear feet, 24 inch @ 87 cents. 3,650 " " 16 " " 62 " }	{ \$5,656 (estimated)..... }	{ † 51 98 } { 5,801 3; }	307 38	6,160 73
* Oct. 8,	O'Rourke & Nelson.....	{ Laying 2,130 feet 20-inch pipe in Border street } { East Boston..... }	{ \$1.00 per linear foot..... } { \$1.00 per joint..... }	1,785 00	{ † 265 05 } { 367 80 }	2,417 85
* " 19,	Thomas L. Livermore....	Blasting Bynner street, Roxbury.....	\$3.00 per cubic yard.....	.....	474 00	474 00
* " 29,	Thomas Burke.....	Blasting Beach Glen Avenue, Roxbury.....	\$4.00 " ".....	.....	15 20	15 20
* " 30,	O'Rourke & Nelson.....	{ Laying 16-inch pipe in Blue Hill avenue, Dorchester..... }	{ 80 cents per linear foot..... } { \$5.00 per cubic yard for rock excavation above grade.... } { \$1.00 per cubic yard for earth excavation below grade.... } { \$10.00 per M. feet for lumber for shoring..... } { 80 cents each for 16-inch pipe-joints..... }	1,798 97	94 68	1,893 65

* Nov. 4,	L. G. Burnham & Co.....	{ Furnishing 800 tons Cumberland coal in bins } { Chestnut Hill Pumping Station..... }	\$4.15 per ton, 2,240 lbs..	2,340 60	1,045 80	3,386 40
* " 16,	James Dolan.....	Blasting Blue Hill avenue, Dorchester	\$2.00 per cubic yard .....	.....	392 60	392 60
* " 21,	Granular Metal Co.....	{ Composition castings to amount of \$2,000 } { (authority given by Mayor to purchase with- } { out advertising)..... }	{ No. 1, 21 ¹⁵ cents per lb. } { " 2, 20 ³⁵ " " " " " " " " } { " 3, 19 ¹ " " " " " " " " }	1,021 23	2,885 90	3,907 13
* " 27,	{ Warren Foundry and } { Machine Company.. }	400 tons 12-inch pipe, Class B.....	{ \$18.40 per ton f. o. b. cars, } { Boston .....	.....	7,274 23	7,274 23
* " 27,	John J. Kelley	Blasting Arnold street, West Roxbury.....	\$2.44 per cubic yard .....	.....	277 67	277 67
* " 27,	{ Warren Foundry and } { Machine Company.. }	30 tons 4-inch B pipe.....	{ \$19.40 per ton, 2,000 lbs. f. o. b. } { cars, Boston .....	.....	586 53	586 53
* Dec. 2,	Martin J. Connolly	Blasting Bellevue and Stanley streets, Dorchester,	{ \$3.25 per } { cubic yard } { Withdrawn from } { contractor, De- } { cember 23, and } { work given to } { Thomas Burke, } { December 26, 1896, } { to be finished by } { day work	{ } { } { } { } { } { } { }	{ 25 95 } { } { } { } { } { } { }	{ paid } { Con- } { nolly. } { } { paid } { Burke. } { }
* " 2,	Martin J. Connolly	Blasting Blue Hill avenue, Dorchester	\$2.55 per cubic yard .....	.....	68 85	68 85
* " 3,	James Fagan.....	Alterations on stable, Albany street yard.	\$10,242.....	.....	{ + 504 54 } { 10,242 00 }	{ 10,746 54 }
* " 17,	James McDonald.....	Blasting, Harold street, Roxbury.....	\$3.25 per cubic yard .....	.....	186 55	186 55
* " 19,	Thomas Burke.....	" Blue Hill avenue, Dorchester.....	\$2.70 " .....	.....	68 85	68 85

Contracts Made and Pending during Year. — *Continued.*

DATE.	CONTRACTORS.	WORK.	AMOUNT.	PAID ON CONTRACT.		
				Previous Years.	Year 1897.	Total.
1896.						
* Dec. 22,	{ George H. Stoddard, } { Manager	{ Insulating 20-inch main over Cottage Farm } { Bridge	\$800.00 .....	.....	\$800 00	\$800 00
* " 23,	James McDonald	Blasting, Wait street, Roxbury	\$2.98 per cubic yard .....	.....	87 61	87 61
1897.						
* Jan. 6,	Horatio Wellington & Co.	{ 1,500 tons Cumberland coal delivered into bins, } { Mystic Pumping Station	\$3.81 per ton 2,240 lbs. ....	.....	5,841 48	5,841 48
* " 11,	Thomas Burke	Blasting, Centre street, Roxbury	\$7.00 per cubic yard .....	.....	14 00	14 00
* " 15,	Patrick Cushing	" Rockledge street, Roxbury	\$4.50 " .....	.....	33 75	33 75
* " 20,	{ Camden Iron Works, } { Philadelphia, Pa.	{ 275 tons 8-inch "B" pipe	@ \$17.38 per ton, { estimated, 2,000 lbs. } \$52,748.30 }	.....	55,451 94	55,451 94
		800 " 12 " "B" " .....		.....		
		240 " 16 " "A" " .....		.....		
		540 " 24 " "B" " .....		.....		
		505 " 30 " "B" " .....		.....		
		625 " 36 " "A" " .....		.....		
		2,985 " .....		.....		
		{ 50 " Specials .....		.....		
* " 20,	{ McNeal Pipe and } { Foundry Co., Burling- } { ton, N. J.	{ 700 tons 6-inch "B" pipe	@ \$17.17 per ton, 2,000 lbs. } estimated \$35,767.55 }	.....	54,306 59	54,306 59
		550 " 12 " "A" " .....		.....		
		635 " 20 " "A" " .....		.....		
		505 " 30 " "B" " .....		.....		
		625 " 36 " "A" " .....		.....		
		3,015 " .....		.....		
		{ 50 " Specials .....		.....		

WATER DEPARTMENT.

19

* " 30,	Alexander McMurtry....	Blasting, Leicester street, Brighton.....	\$3.75 per cubic yard	204 75
* Feb. 2,	Coffin Valve Company...	{ 4 36-inch stop cocks @ \$438.50 each 4 30 " " " 312.50 " 12 24 " " " 178.00 " 15 20 " " " 138.00 " 50 12 " " " 37.50 " }	.....	9,085 00
* " 4,	{ Lockwood Manufac- turing Company }	Patterns for specials.....	\$220.00.....	220 00
* " 4,	Atlantic Works	{ Repairs on pumping engine No. 3, at Chestnut Hill Pumping Station..... }	{ \$2,397.00, less \$75.00 on account of change in specifications.. }	2,322 00
* " 24,	James McLaughlin & Son.	Blasting, Geneva avenue, Dorchester.....	\$4.50 per cubic yard	32 40
* " 27,	Thomas Burke.....	" service-pipe trench 33 Quincy street....	\$7.00 "	18 20
Mar. 2,	Matthew E. Nawn.....	{ Teaming water-pipes for year ending March 15, 1898	{ 37½ cents per ton, short haul 88½ " " " long " }	3,161 04
" 2,	William Curley.....	{ Brass and Composition Castings for year end- ing March 15, 1898	{ No. 1, 17½ cents per lb. No. 2, 14½ " " " " " No. 3, 12 " " " " "	4,617 51
* " 4,	John J. Kelley	Blasting, Robinwood street, West Roxbury	\$7.00 per cubic yard	42 70
* " 10,	John H. O'Donnell	" Calumet street, Roxbury.....	\$3.20 "	13 76
* " 15,	Thomas Burke.....	" Fowler street, Dorchester	\$7.00 "	28 00
* " 20,	" "	" Wabon street, Roxbury....	\$6.90 "	27 60
* " 22,	Thomas & Co.	{ 800 tons Cumberland coal delivered in bins at Chestnut Hill Pumping Station	\$3.57 per ton (2,240 lbs).....	2,716 12
* " 22,	{ Coöperative Foundry Company, Lynn, Mass	Iron castings for year ending March 15, 1898.....	{ No. 1, 1½ cents per lb. " 2, 1½ " " " " "	1,790 50 May 28, 1897 (Annulled
* April 2,	Patrick Cushing	Blasting, Tonawanda street, Dorchester.....	\$4.20 per cubic yard	58 80
* " 8,	John J. Kelley.....	" Marcella street, Roxbury	\$3.70 "	61 42

* " 1,	O'Rourke & Nelson.....	{ Laying about 200 feet, 24-inch pipe in South street, West Roxbury, northerly from Arnold Arboretum entrance.....	{ \$1.50 per linear foot for pipe laid..... \$4.00 per cubic yard, for rock excavation above grade... \$5.00 per cubic yard for rock excavation below grade... \$1.20 per pipe joint run solid with lead.....	330 00	330 00
* " 3,	Patrick Cushing	Blasting, Columbus avenue extension	\$1.30 per cubic yard	760 63	760 63
* " 11,	John J. Kelley.....	" Wolcott street, Dorchester.....	\$3.97 "	31 76	31 76
* " 11,	Thomas Burke.....	" Columbus avenue Extension.....	\$2.45 "	63 70	63 70
* " 18,	"	" Champney street, South Boston.....	\$4.00 "	41 60	41 60
" 19,	A. J. Wellington.....	{ Excavating pipe trench in South Huntington avenue, Basswood, Floyd and Crawford sts., Roxbury	{ 30 cents per linear foot for excavation and back filling... \$2.25 per cubic yard for rock excavation	710 55	710 55
* " 21,	Thomas Burke.....	Blasting, Gay street, Roxbury	\$4.00 per cubic yard	26 40	26 40
* " 21,	John J. Kelley.....	" Merwin street, West Roxbury.....	\$2.97 "	130 68	130 68
* " 23,	Daniel W. Dwyer.....	" Oakland street, Dorchester.....	\$3.25 "	264 55	264 55
* " 25,	L. G. Burnham & Co.....	{ 800 tons Georges Creek coal for Chestnut Hill } Pumping-station.....	\$3.47 per ton, 2,240 lbs.....	2,852 40	2,852 40
* " 30,	John J. Kelley.....	Blasting, Montebello Road, West Roxbury	\$2.97 per cubic yard	251 86	251 86
* July 2,	James McDonald	" Adelaide street, "	\$2.72 "	340 27	340 27
* " 8,	O'Rourke & Nelson	{ Removing about 640 feet 12-in. pipe in Federal street, between Essex street and Mt. Wash- ington avenue	75 cents per linear foot	512 25	512 25
* " 9,	{ James McLaughlin & } Son	Blasting, Kilton street, Dorchester.....	\$3.50 per cubic yard	16 10	16 10
* " 10,	Thomas Burke.....	" Cherokee street, Roxbury.....	\$2.85 "	47 60	47 60

Contracts Made and Pending during Year.—Continued.

DATE.	CONTRACTORS.	WORK.	AMOUNT.	PAID ON CONTRACT.		
				Previous Years.	Year 1897.	Total.
1897. * July 10,	Thomas Burke.....	Blasting, Devon street, Dorchester.....	\$3.00 per cubic yard.....	.....	\$31 80	\$31 80
* " 21,	{ Metropolitan Con- struction Company, }	{ Repair of bridges supporting water-pipe over Boston & Maine R.R. tracks on Main street, Charlestown..... }	\$900.....	.....	900 00	900 00
* " 24,	Thomas Burke.....	Blasting, Norton street, Dorchester.....	\$5.00 per cubic yard.....	.....	44 50	44 50
* " 24,	John J. Kelley.....	" Columbus avenue, Roxbury.....	\$2.44 ".....	.....	313 05	313 05
* " 28,	" ".....	" Capen street, Dorchester.....	\$7.00 ".....	.....	74 20	74 20
* " 30,	John McLaughlin.....	" Codman park, Roxbury.....	\$3.75 ".....	.....	16 88	16 88
* Aug. 3,	{ Metropolitan Con- struction Company, }	{ Scraping and repainting iron supports of 20- inch pipe over Boston & Maine R.R. tracks, Main street, Charlestown..... }	\$35.....	.....	85 00	35 00
* " 5,	John J. Kelley.....	Blasting, Heath street, Roxbury.....	\$2.75 per cubic yard.....	.....	515 08	515 08
* " 10,	Coffin Valve Company..	50 — 16-inch valves.....	\$54.25 each.....	.....	2,712 50	2,712 50
* " 16,	Thomas Burke.....	Blasting, Tower street, Roxbury.....	\$3.38 per cubic yard.....	.....	330 23	330 23
* " 20,	O'Rourke & Nelson.....	Removing 12-inch pipe, Federal street.....	75 cents per linear foot.....	.....	780 00	780 00
" 26,	John O'Brien.....	{ Excavating and refilling pipe trench, Haley, Hinckley and Harrishof streets, Roxbury, viz.: — Digging and refilling trench 5 feet below sub-grade, in earth..... Earth excavation less than 5 feet below sub- grade..... Rock excavation and refilling..... }	30 cents per lin. ft. of trench ..	.....	411 00	411 00
			60 cents per cubic yard.....	.....		
			\$2.75.....	.....		
						

* Sept. 1,	Thomas Burke.....	Blasting, Adams street, Dorchester	\$4.00 per cubic yard	59 60
* " 2,	James McDonald	" Woodlawn avenue, Dorchester	\$2.80 "	79 80
" 2,	Kimball, Freed & Co.....	Cylinder oil and engine oil for current year	{ Cylinder oil @ $\frac{31}{32}$ cents per lb., Engine " @ $\frac{27}{32}$ " }	432 18
* " 3,	J. J. Kelley	Blasting, Burney street, Roxbury	\$4.00 per cubic yard	22 00
* " 10,	Thomas Burke.....	" Calumet street, Roxbury (service-pipe), ...	\$3.25 "	18 85
* " 11,	" "	" Quincy street, Dorchester.....	\$4.40 "	24 64
* " 11,	" "	" Elmo street, Dorchester	\$2.40 "	287 52
* " 13,	" "	" Fowler street, Dorchester.....	\$4.60 "	22 54
* " 14,	{ James McLaughlin & Son.....	" Kilton street, Dorchester.....	\$3.95 "	56 49
* " 15,	James McDonald	" Calumet street, Roxbury (service-pipe), ...	\$4.00 "	23 20
* " 16,	John E. Brewer	Inspection of hydraulic elevators in Department, ...	\$400	131 87
* " 18,	Thomas Burke.....	Blasting, Columbus avenue, Roxbury	\$2.90 per cubic yard	26 10
* " 22,	James McDonald	" Coffin street, Dorchester	\$2.98 "	177 01
" 22,	{ McNeal Pipe and Foundry Co., Burling- ton, N. J	{ 15 tons 4-inch "B" pipe..... 200 " 6 "	@ \$16.03 per ton of 2,000 lbs., estimated.....	7,848 29
" 22,	M. F. Sullivan.....	Building Sanitary at Chestnut Hill Reservoir.....	\$1,300.	
* " 25,	Thomas Burke.....	Blasting Dunreath street, Roxbury	\$2.40 per cubic yard.....	66 00
* " 27,	" "	" Allston Heights, Brighton.....	\$1.00 "	145 60
* Oct. 8,	" "	{ " Dudley street, Dorchester (4 service) pipe trenches).....	\$4.30 "	119 97

Contracts Made and Pending during Year. — *Concluded.*

DATE.	CONTRACTORS.	WORK.	AMOUNT.	PAID ON CONTRACT.		
				Previous Years.	Year 1897.	Total.
1897.						
* Oct. 15,	Thomas Burke.....	Blasting, Mascot avenue, Dorchester.....	\$3.98 per cubic yard.....	.....	\$69 25	\$69 25
* " 19,	Thomas Livermore.....	" Bynner street, Roxbury.....	\$3.00 " ".....	.....	474 00	474 00
* " 22,	James McDonald.....	" Phipps avenue, Dorchester.....	\$2.25 " ".....	.....	205 88	205 88
* " 25,	{ James McLaughlin & } { Son..... }	{ Devon street, Dorchester (service pipe- } { trench)..... }	\$4.25 " ".....	.....	18 28	18 28
* " 25,	Thomas Burke.....	" Pereival street, Dorchester.....	\$2.97 " ".....	.....	308 58	308 58
Nov. 8,	{ George H. Stoddard } { and Gardner T. Voor- } { hees..... }	{ Covering 20-inch water-pipe on Cottage Farm } { bridge with additional covering of felt and } { rosin..... }	\$225	.....		
* " 10,	Patrick Cushing.....	Blasting, Gawain street, Dorchester.....	\$3.75 per cubic yard.....	.....	74 25	74 25
* " 15,	James McDonald.....	" Delle avenue, Roxbury.....	\$4.75 " ".....	.....	99 75	99 75
* " 15,	" ".....	" Carmel street, Roxbury.....	\$4.25 " ".....	.....	42 50	42 50
* " 18,	Thomas Burke.....	" Normandie street, Dorchester.....	\$3.75 " ".....	.....	235 13	235 13
* " 18,	" ".....	" Arcola street, Roxbury.....	\$2.97 " ".....	.....	94 45	94 45
Dec. 9,	" ".....	" Columbia road, Dorchester.....	\$9.00 " ".....	.....		
" 17,	" ".....	" Ritchie street, Roxbury.....	\$8.75 " ".....	.....		
" 23,	John J. Kelley.....	{ Patten, Rodman and Wachusett } { streets, West Roxbury..... }	\$2.57 " ".....	.....		
" 28,	Thomas Burke.....	" Geneva avenue, Dorchester.....	\$2.74 " ".....	.....		

1898. Jan.	5,	John C. Coleman & Son..	{ Excavating and refilling water-pipe trenches, Columbit road, Dorchester..... }	{ 55 cents per cubic yard for earth excavation and refilling; \$1.49 per cubic yard for rock excavation and refilling. }		
"	13,	John J. Kelley	Blasting, Maple street extension, West Roxbury..	\$3.98 per cubic yard.		
"	21,	{ James McLaughlin & } { Son... .. }	" Bellevue street, Dorchester	\$3.50 "	"	
"	26,	O'Brien & Byrne	" Wabon and Wabeno streets, Roxbury..	\$2.35 "	"	

In the appendices annexed hereto are submitted the reports of the City Engineer and the superintendents of the department. They furnish full details of the present condition of the works and what has been accomplished.

Respectfully,

JOHN R. MURPHY,

Water Commissioner.

APPENDIX A.

REPORT OF THE INCOME DIVISION.

OFFICE OF GENERAL SUPERINTENDENT, INCOME DIVISION,
CITY HALL, BOSTON, February 1, 1898.

HON. JOHN R. MURPHY,
Water Commissioner :

SIR: Herewith please find report of the Income Division, Water Department, for the calendar year ending December 31, 1897, it being impracticable to render report of this division for the financial year; also tables covering the work of the Meter Service branch of the Income Division for the financial year ending January 31, 1898.

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“ in service January 31, 1898	XXIV.
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Table I.

	COCHIT- UATE.	MYSTIC.				Totals.
	Boston, ex- cluding Charlestown.	Charlestown.	Chelsea.	Somerville.	Everett.	
Number of takers by annual rates	90,434	6,802	6,964	14,552	5,561	124,313
Number of takers by meter	4,173	208	94	140	36	4,651
Number of takers of all kinds	94,607	7,010	7,058	14,692	5,597	128,964

Table II.

Showing the purposes for which water was taken by Annual Rates, and the districts where taken.

PURPOSES FOR WHICH WATER WAS TAKEN BY ANNUAL RATES.	COCHIT- UATE.	MYSTIC.				Totals.
	Boston, ex- cluding Charlestown.	Charlestown.	Chelsea.	Somerville.	Everett.	
Armories		3	1			4
Bakeries	258	23	26	14	6	327
Bath-houses	5					5
Building purposes	1,675	26	41	303	179	2,224
Cemeteries	11		1	1		13
Churches	215	12	13	25	7	272
Clubs	99	24	19	17	8	167
<i>Carried forward</i>	2,263	88	101	360	200	3,012

Table II. — *Concluded.*

PURPOSES FOR WHICH WATER WAS TAKEN BY ANNUAL RATES.	COCHIT- UATE.	MYSTIC.					Totals.
	Boston ex- cluding Charlestown.	Charlestown.	Chelsea.	Somerville.	Everett.		
<i>Brought forward</i>	2,263	88	101	360	200	3,012	
Depots.....	38	2	1	6	4	51	
Disinfectant.....	1					1	
Dwelling-houses.....	49,102	4,660	4,929	9,015	3,697	71,403	
Fire Department:							
Chemical engines.....	10					10	
Combination wagons....	2					2	
Hydrants and reser- voirs.....	6,824	289	94	149	53	7,409	
Ladder companies.....	16					16	
Steam fire-engines.....	40	5	6	6	2	59	
Water towers.....	1					1	
Filling tank (special),...	1					1	
Fountains.....	24	4	4	10	4	46	
Freight-houses.....	5	12				17	
Gate-house.....	1					1	
Greenhouses.....	70		2	13	7	92	
Gymnasiums.....	4					4	
Halls.....	139	11	10	9	8	177	
Hand hose.....	9,022	252	618	2,764	774	13,430	
Hospitals.....	60		2	1		63	
Hotels.....	3					3	
Laundries.....	463	35	30	45	17	590	
Libraries and museums...	10	1	1	1	2	15	
Manufactories.....	23	7	30	15	9	84	
Model houses.....	8,155	441	227	435	108	9,366	
Morgue.....	1					1	
Motors.....	12	1	2	2	1	18	
Offal stations.....	2					2	
Offices.....	1,444	43	52	29	18	1,586	
Photograph rooms.....	28	2	2	2	1	35	
Police stations.....	7	1	1		1	10	
Public buildings.....	8	1	1		1	11	
Public institutions.....	4					4	
Puddling trenches.....	24		3	1	1	29	
Restaurants and lunches	345	13	8	9	7	382	
Saloons.....	491	52				543	
Schools.....	120	5	9	9	4	147	
Sewers (building).....							
Sewers (flushing).....	2		1	1		4	
Shops.....	2,705	167	105	126	33	3,136	
Shipping.....	29					29	
Stables.....	3,613	323	377	1 220	484	6,017	
Steam-engines.....	156	21	12	9	5	203	
Steam-rollers.....	7					7	
Steam-crushers.....	7			1		8	
Stores.....	5,107	365	335	313	119	6,239	
Theatres (special).....	5					5	
Town of Revere.....	1					1	
Urinals (public).....	11					11	
Ward-rooms.....	7					7	
Washing carts.....	3					3	
Watering streets.....	18	1	1	1	1	22	
Totals.....	90,434	6,802	6,964	14,552	5,561	124,313	

Table III.

Showing the amounts assessed for water taken by Annual Rates, the purposes for which and the places where taken.

STYLE OF PREMISES.	COCHIT- UATE.	MYSTIC.					Totals.
	Boston, ex- cluding Charlestown.	Charlestown.	Chelsea.	Somerville.	Everett.		
Armories.....		\$56 50	\$12 00				\$68 50
Bakeries.....	\$3,363 44	296 00	348 00	\$187 00	\$91 00		4,285 44
Bath-houses....	206 00						206 00
Building pur- poses.....	15,840 16	176 62	199 83	1,416 75	621 59		18,254 95
Cemeteries....	94 17		10 00	5 00			109 17
Churches.....	2,591 00	139 00	160 50	243 67	90 00		3,224 17
Clubs.....	1,754 67	270 00	231 25	268 00	97 50		2,621 42
Depots.....	746 63	29 50	19 50	87 00	98 00		980 63
Disinfectant...	25 00						25 00
Dwel'g-houses,	720,369 55	62,263 79	64,112 28	119,140 09	44,277 33		1,010,163 04
Fire Depart- ment:							
Chemical- engines....	150 00						150 00
Combination wagons....	30 00						30 00
Hydrants and reser- voirs.....	102,360 00	4,335 00	2,670 00	4,172 00	1,484 00		115,021 00
Ladder com- panies.....	240 00						240 00
Steam fire-en- gines.....	1,000 00	115 00	140 00	140 00	50 00		1,445 00
Water tow- ers.....	15 00						15 00
Filling tank (special)....	156 00						156 00
Fountains.....	464 67	40 00	30 00	74 00	28 75		637 42
Freight-houses,	47 50	83 33					130 83
Gate-house....	15 00						15 00
Greenhouses...	1,176 00		24 00	103 00	64 00		1,367 00
Gymnasiums...	546 50						546 50
Halls.....	1,992 92	125 00	180 00	93 50	88 50		2,489 92
Hand-hose....	45,110 00	1,260 00	3,090 00	13,820 00	3,870 00		67,150 00
Hospitals.....	4,445 00		33 00	170 00			4,648 00
Hotels.....	377 00						377 00
Laundries.....	8,461 95	665 83	555 67	747 20	304 09		10,734 74
Libraries and museums....	172 00	10 00	12 00	26 00	36 00		256 00
Manufactories.	455 24	147 62	359 17	212 42	68 50		1,242 95
Model houses..	177,090 76	8,219 61	4,952 74	9,142 82	2,327 51		201,733 44
Morgue.....	10 00						10 00
Motors.....	655 40	20 00	155 00	10 00	5 00		845 40
Offal-stations..	225 00						225 00
Offices.....	14,347 46	441 00	518 00	275 25	147 33		15,729 04
Photograph rooms.....	547 50	39 50	35 00	43 00	12 00		677 00
Police-stations,	130 00	13 00	17 00	...	20 00		180 00
Carried forw'd,	\$1,105,211 52	\$78,756 30	\$77,864 94	\$150,376 70	\$53,781 10		\$1,465,990 56

Table III. — *Concluded.*

STYLE OF PREMISES.	COCHIT- UATE.	MYSTIC.				Totals.
	Boston, ex- cluding Charlestown.	Charlestown.	Chelsea.	Somerville.	Everett.	
<i>Brought forward,</i>	\$1,105,211 52	\$78,756 30	\$77,864 94	\$150,376 70	\$53,781 10	\$1,465,990 56
Public buildings	532 00	44 50	39 00	.....	32 50	648 00
Public Institutions	7,200 00	.....	.....	.....	.....	7,200 00
Puddling trenches	1,044 46	.....	231 63	303 32	330 00	1,909 41
Restaurants and lunches	6,125 85	221 08	120 00	133 34	94 00	6,694 27
Saloons	18,294 23	2,116 50	.....	.....	.....	20,410 73
Schools	1,734 67	80 33	179 67	146 25	55 17	2,196 09
Sewers (build- ing)	.....	.....	.....	.....	.....	.....
Sewers (flush- ing)	502 25	.....	100 00	40 00	.....	642 25
Shops	24,625 78	1,140 40	842 59	864 20	236 25	27,709 22
Shipping	1,148 32	.....	.....	.....	.....	1,148 32
Stables	25,390 13	2,868 45	1,791 35	6,774 99	1,970 31	38,795 23
Steam-engines	4,412 09	324 58	160 00	61 16	33 00	4,990 83
Steam-rollers	155 22	.....	.....	.....	.....	155 22
Steam-crush'rs	153 34	.....	.....	98 31	.....	251 65
Stores	59,354 68	3,173 37	2,964 01	2,874 32	952 24	69,318 62
Theatres (spe- cial)	224 04	.....	.....	.....	.....	224 04
Town of Re- vere	4,481 14	.....	.....	.....	.....	4,481 14
Urinals (pub- lic)	345 00	.....	.....	.....	.....	345 00
Ward-rooms	70 00	.....	.....	.....	.....	70 00
Washing carts	100 00	.....	.....	.....	.....	100 00
Watering sts	46,710 40	50 00	1,507 20	4,731 28	647 68	53,646 56
Totals	\$1,307,815 12	\$88,775 51	\$85,800 39	\$166,403 87	\$58,132 25	\$1,706,927 14

Table IV.

Showing the purposes for which water was taken by Meter, and the districts where taken.

PURPOSES FOR WHICH WATER WAS TAKEN BY METER.	COCHIT- UATE.	MYSTIC.				Totals.
	Boston, ex- cluding Charlestown.	Charlestown.	Chelsea.	Somerville.	Everett.	
Bakeries	8	4	1			13
Bath-houses	5					5
Boarding-houses	61			2	2	65
Bottling	44	2				46
Breweries	25	1				26
Cemeteries	3	1			1	5
Chemicals	9			2	1	12
Club-houses	24					24
Chutes	1					1
Distilleries	4	1		2		7
Electrical companies....	12	2	1			15
Elevators and motors ...	508	9	5	5	3	530
Factories	234	29	35	25	7	330
Fish-houses	20					20
Gas-works	12	2	1			15
Greenhouses	13				2	15
Halls	16	2	1	1		20
Hospitals	21	1	3	2		27
Hotels	103	6		3		112
Iron-works	35	2	3	1	1	42
Laundries	18	2	3		1	24
Markets	6					6
Mills and engines	59	9	2	5	1	76
Model houses	875	20	3	4		902
Navy Yard and barracks, ...		3				3
Offices, stores and shops, ...	1,105	23	10	26	4	1,168
Oil-works	7					7
Parks	10	1				11
Police-stations	13			1		14
Public institutions	28	2		1		31
Saloons and restaurants, ...	322	2				324
Schools	116	14	4	19	8	161
Slaughtering-houses ...	4			6		10
Stables	297	51	15	26	4	393
Steam & Str't R.R. co.'s, ...	58	13	5	7	1	84
Stone-works	7					7
Sugar refineries	1					1
Tanneries	4					4
Theatres	15					15
Warehouses	8					8
Wharves and shipping..	62	6	2	2		72
Totals	4,173	208	94	140	36	4,651

Table V.

Showing the amounts assessed by Meter rates, the purposes for which and the districts where water was taken.

ASSESSED BY METER RATES.	COCHITU- ATE.	MYSTIC.				Totals.
	Boston, excluding Charlestown	Charlestown.	Chelsea.	Somerville.	Everett.	
Bakeries	\$386 00	\$979 60	\$84 00			\$1,449 60
Bath-houses	1,044 50					1,044 50
Boarding-houses...	3,681 90			\$15 00	\$91 00	3,787 90
Bottling	4,216 80	197 30				4,414 10
Breweries.....	38,383 30	3,096 00				41,479 30
Cemeteries.....	119 40				47 10	166 50
Chemicals	709 50	246 90		453 60	2,097 60	3,507 60
Club-houses	5,675 40					5,675 40
Chutes.....	729 00					729 00
Distilleries	866 20	160 80		227 20		1,254 20
Electrical compa- nies.....	22,707 30	848 10	1,484 40			25,039 80
Elevators and motors	62,434 95	1,217 00	187 20	61 96	45 00	63,946 11
Factories	57,361 20	3,252 90	8,927 10	4,905 10	426 60	74,872 90
Fish-houses.....	1,916 00					1,916 00
Gas-works	15,114 10	848 10	180 70			16,142 90
Greenhouses.....	1,126 00				27 60	1,153 60
Halls	2,558 35	77 00	23 80	35 00		2,694 15
Hospitals	18,963 80	111 70	1,933 10	204 80		21,213 40
Hotels	59,864 50	683 50		260 80		60,808 80
Iron-works	7,961 30	419 10	30 80	56 00	364 80	8,832 00
Laundries	7,632 10	666 10	256 70		191 10	8,746 00
Markets.....	533 00					533 00
Mills and engines..	11,495 05	2,719 90	926 30	324 60	22 40	15,488 25
Model-houses	78,938 25	1,367 60	270 00	423 70		80,999 55
Navy Yard and bar- racks		5,831 40				5,831 40
Offices, stores and shops	141,810 12	1,687 60	512 00	1,201 60	107 55	145,318 87
Oil-works	920 40					920 40
Parks	1,550 30	18 20				1,568 50
Police-stations....	2,272 40			58 80		2,331 20
Public institutions..	17,271 40	3,482 60		68 60		20,822 60
Saloons and restau- rants.....	32,656 50	65 80				32,722 30
Schools	16,386 50	1,247 70	139 30	1,240 30	307 40	19,321 20
Slaughtering- houses	2,350 40			14,684 50		17,034 90
Stables.....	19,016 85	2,506 20	854 70	1,787 55	146 60	24,311 90
Steam and street R.R. companies..	98,684 00	28,467 80	3,095 60	12,305 20	152 30	142,704 90
Stone-works	1,928 00					1,928 00
Sugar-refineries....	21,542 40					21,542 40
Tanneries.....	600 90					600 90
Theatres	3,029 40					3,029 40
Warehouses	4,913 80					4,913 80
Wharves and ship- ping	26,558 80	4,176 20	1,725 20	92 40		32,552 60
Totals.....	\$795,910 07	\$64,375 10	\$20,630 90	\$38,406 71	\$4,027 05	\$923,349 83

Table VI.

Showing the quantities of water taken by Meter, the purposes for which and the districts where taken.

STYLE OF PREMISES TAKING WATER BY METER.	COCHIT- UATE.	MYSTIC.				Totals.
	Boston, ex- cluding Charlestown.	Charlestown.	Chelsea.	Somerville.	Everett.	
	Cubic ft.	Cubic ft.	Cubic ft.	Cubic ft.	Cubic ft.	Cubic ft.
Bakeries.....	278,000	769,000	60,000			1,107,000
Bath-houses.....	793,000					793,000
Boarding-houses...	2,652,000			7,000	65,000	2,724,000
Bottling.....	3,145,000	142,000				3,287,000
Breweries.....	31,842,000	2,560,000				34,402,000
Cemeteries.....	85,000				34,000	119,000
Chemicals.....	514,000	186,000		358,000	1,728,000	2,786,000
Club-houses.....	4,487,000					4,487,000
Chutes.....	591,000					591,000
Distilleries.....	686,000	119,000		170,000		975,000
Electrical compa- nies.....	17,530,000	695,000	1,217,000			19,442,000
Elevators and mo- tors.....	47,773,000	925,000	133,000	32,000	16,000	48,879,000
Factories.....	50,232,000	2,404,000	7,060,000	3,688,000	303,000	63,687,000
Fish-houses.....	1,451,000					1,451,000
Gas-works.....	12,951,000	696,000	132,000			13,779,000
Greenhouses.....	830,000				18,000	848,000
Halls.....	2,030,000	55,000	17,000	25,000		2,127,000
Hospitals.....	15,644,000	80,000	1,551,000	153,000		17,428,000
Hotels.....	48,589,000	484,000		193,000		49,266,000
Iron-works.....	5,188,000	304,000	22,000	40,000	284,000	5,838,000
Laundries.....	6,144,000	523,000	187,000		141,000	6,995,000
Markets.....	386,000					386,000
Mills and engines..	8,912,000	2,154,000	739,000	238,000	16,000	12,059,000
Model-houses.....	60,244,000	990,000	195,000	313,000		61,742,000
Navy Yard and bar- racks.....		5,004,000				5,004,000
Offices, stores and shops.....	107,343,000	1,270,000	362,000	844,000	73,000	109,892,000
Oil-works.....	752,000					752,000
Parks.....	1,215,000	13,000				1,228,000
Police-stations....	1,712,000			42,000		1,754,000
Public institutions,	13,969,000	2,861,000		49,000		16,879,000
Saloons and res- taurants.....	24,491,000	47,000				24,538,000
Schools.....	12,609,000	907,000	90,000	897,000	204,000	14,707,000
Slaughter'g-houses,	1,879,000			13,947,000		15,826,000
Stables.....	13,906,000	1,790,000	601,000	1,304,000	100,000	17,701,000
Steam and street R.R. companies..	99,743,000	27,295,000	2,522,000	12,740,000	111,000	142,411,000
Stone-works.....	1,493,000					1,493,000
Sugar-refineries...	24,898,000					24,898,000
Tanneries.....	455,000					455,000
Theatres.....	2,311,000					2,311,000
Warehouses.....	4,003,000					4,003,000
Wharves and ship- ping.....	21,264,000	3,416,000	1,413,000	66,000		26,159,000
Totals.....	655,020,000	53,689,000	16,301,000	35,106,000	3,093,000	765,209,000

Table VII.
Number and Amounts of Abatements Allowed during the Year 1897.

ON ACCOUNT OF ASSESS- MENTS FOR YEAR.	COCHITUATE.		MYSTIC.							
	Boston, excluding Charlestown.		Charlestown.		Chelsea.		Somerville.		Everett.	
	No.	Amount.	No.	Amount.	No.	Amount.	No.	Amount.	No.	Amount.
1897.....	3,277	\$21,188 21	200	\$1,071 42	311	\$1,669 57	342	\$1,533 62	210	\$1,014 49
1896.....	1,394	*47,389 14	97	*3,304 47	176	1,321 36	363	2,238 30	161	1,017 38
1895.....	12	2,243 30	1	2 50	.....	.....	2	7 80		

Total, Cochituate\$70,820 65

Total, Mystic.....\$13,180 91

The abatements allowed on account of 1897 assessments, amounting to \$26,477.31, were due to changes in occupancy of premises, changes in ownership, vacancies, errors in valuations and assessments, inaccuracy of meters as proved by tests, underground leaks for which the owner could not be held entirely responsible, and for other reasons, which, in the judgment of the General Superintendent, entitled the water-taker to consideration.

* Of these amounts, \$22,622 Cochituate, and \$2,575 Mystic, were abated on bills against the Fire Department, on account of reduction in rate for fire-hydrants.

The abatements on account of 1896 and 1895, not including amounts specially noted above, were due to bills uncollectible, changes of ownership, failures, shut off for non-payment, taking of property by the Boston Terminal Company and cleaning up old accounts.

Tables VIII., IX. and X. represent the work of the Off and On Service, as follows:

Table VIII.

NEW ELEVATOR, MOTOR, FIRE AND SERVICE PIPES.	COCHIT- UATE.	MYSTIC.				Totals.
	Boston, ex- cluding Charlestown.	Charlestown.	Chelsea.	Somerville.	Everett.	
Elevator	21	.....	.....	.....	.....	21
Motor.....	6	1	.....	.....	.....	7
Fire.....	49	.....	.....	.....	.....	49
Service	2,420	61	73	562	227	3,343
Totals	2,496	62	73	562	227	3,420

Table IX.

TURNING WATER OFF AND ON.	COCHIT- UATE.	MYSTIC.				Totals.
	Boston, ex- cluding Charlestown.	Charlestown.	Chelsea.	Somerville.	Everett.	
For repairs in mains.....	1,268	6	.....	.....	.....	1,274
For repairs in services...	3,687	400	13	12	7	4,119
For non-payments.....	1,592	90	128	118	128	2,056
For waste.....	20	.....	1	.....	1	22
Turning on first time....	3,173	171	349	484	268	4,445
Vacants	2,221	51	70	323	213	2,878
Totals	11,961	718	561	937	617	14,794

Table X.

	Cochituate.	Mystic.	Total.
Received for turning water off and on for re- pairs, deposited with the City Collector..	\$1,742 50	\$221 00	\$1,963 50

Table XI.

Showing the kind of fixtures in use January 31, 1898, their number and the districts wherein located.

CLASS OF FIXTURES IN USE JANUARY 31, 1898.	COCHIT- UATE.	MYSTIC.				Totals.
	Boston, ex- cluding Charlestown.	Charlestown.	Chelsea.	Somerville.	Everett.	
Bath-tubs	58,227	1,769	2,430	7,661	3,328	73,415
Bowls	92,640	2,545	2,978	8,009	3,096	109,268
Foot-tubs	414	10	6	8	1	439
Sinks	153,298	12,459	9,924	17,639	5,860	199,180
Taps	23,140	1,302	1,178	3,416	922	29,958
Urinals, automatic	4,622	101	41	25	2	4,791
“ otherwise	594	86	37	28	21	766
Wash-tubs	90,853	2,295	2,851	9,517	3,195	108,711
Water-closets	135,170	8,438	7,536	15,321	4,647	171,112
Totals	558,958	29,005	26,981	61,624	21,072	697,640

Table XII.

WASTE DETECTION.

Premises on which defective fixtures were found .	1,435
Premises re-examined	1,448
Second notices to repair issued	116
Wilful waste	2

The defective fixtures may be divided into the following classes:

Ball-cocks and valves	959
Sink, hopper, bowl and bath faucets	521
Service pipes burst	120
Wilful waste	2

Number of returns of waste received from the Waste and Deacon Division	7,647
Second notices on above issued from Income Division office	2,782

Table XIII.**ELEVATOR, MOTOR AND FIRE-PIPE SERVICE, FOR THE YEAR ENDING DECEMBER 31, 1897.**

Total number of hydraulic elevators in service December 31, 1897	525
New elevators added to service during 1897	16
Elevators changed to steam-power	5
Elevators changed to electric-power	13
Elevator cylinders measured and clocks compared	352
Elevator cylinders remeasured and clocks compared	148
Elevator clocks found requiring readjustment	74
Elevator clocks found requiring repairs	28
Elevator mechanism found requiring repacking	21
Total number of hydraulic motors in service December 31, 1897	121
New motors added to service during 1897	3
Number of buildings equipped with fire service December 31, 1897	443
Number of visits made to such premises	710
Number of outlet valves inspected	5,254
Number of outlet valves sealed and resealed	2,422
Inspection of hydrants	158
Resealing of hydrants	93

METER SERVICE.

The following tables represent the work of the Meter Service branch of the Income Division for the year ending January 31, 1898:

Table XIV.**STATEMENT OF METERS FOR YEAR ENDING JANUARY 31, 1898.**

Meters belonging to department, January 31, 1897	5,164
Purchased during year	160
	5,324
Condemned during year	17
Lost in service during year	7
	24
Meters belonging to department, January 31, 1898	<u>5,300</u>

Table XV.

DISTRIBUTION OF METERS, JANUARY 31, 1898.

In service	4,937
At department shop	274
At factory for repairs	89
	5,300

Table XVI.GENERAL STATEMENT OF WORK PERFORMED ON METERS
DURING YEAR ENDING JANUARY 31, 1898.

	Meters.	Boxes.
Applied	363	98
Discontinued.....	232	
Changed	1,373	
Changed location	29	
Tested	2,887	
Repaired at shop.....	945	
Repaired at factory	283	
Repaired in service	722	142

Table XVII.

METERS CONDEMNED.

	DIAMETER IN INCHES.					Totals.
	2	1½	1	¾	⅝	
Metropolitan.....	.....	.....	2	10	.....	12
Ball & Fitts... ..	.....	.....	1	.....	1	2
Worthington.....	1	.....	.....	1	1	3
Totals.....	1	.....	3	11	2	17

Table XVIII.
METERS APPLIED.

	DIAMETER IN INCHES.								Totals.
	6	4	3	2	1½	1	¾	⅝	
Worthington.....				11	23	51	31	.....	116
Crown.....		3	7	5	14	34	21	81	165
Hersey		2	1	3	6	13	21	1	47
Metropolitan.....					2	3	18	.....	23
B. W. W.....							8	.....	8
Ball & Fitts.....				1					1
Lambert.....								1	1
Empire.....							1	.....	1
Gem.....		1						.....	1
Totals.....		6	8	20	45	101	100	83	363

Table XIX.
METERS DISCONTINUED.

	DIAMETER IN INCHES.							Totals.
	4	3	2	1½	1	¾	⅝	
Worthington.....	1	.....	7	9	22	16	1	56
Crown	2	3	3	8	12	24	58	110
Hersey.....	.....	.....	2	4	3	3	.....	12
Metropolitan.....	.....	.....	.....	3	6	37	1	47
Gem.....	1	1	.....	.....	.....	.....	.....	2
Ball & Fitts.....	.....	.....	1	.....	.....	1	.....	2
Thomson.....	.....	.....	.....	.....	.....	.....	1	1
B. W. W.....	.....	.....	.....	.....	.....	2	.....	2
Totals.....	4	4	13	24	43	83	61	232

Table XX.
METERS PURCHASED.

	DIAMETER IN INCHES.								Totals.
	6	4	3	2	1½	1	¾	⅝	
Worthington.....	.....	1	.....	2	11	21	.....	.....	35
Crown.....	1	3	2	2	9	35	23	.....	75
Empire.....	.....	.....	.....	.....	.....	.....	1	.....	1
Hersey.....	.....	1	1	4	11	16	14	.....	47
Lambert.....	.....	.....	.....	.....	.....	.....	.....	2	2
Totals	1	5	3	8	31	72	38	2	160

Table XXI.
METERS REPAIRED AT FACTORY.

	DIAMETER IN INCHES.						Totals.
	3	2	1½	1	¾	⅝	
Crown.....	2	4	3	15	31	151	206
Worthington .....	.....	20	10	24	.....	4	58
Hersey	1	1	.....	3	11	2	18
Ball & Fitts.....	.....	.....	.....	.....	1	.....	1
Totals.....	3	25	13	42	43	157	283

Table XXII.
METERS REPAIRED IN SERVICE.

CHARACTER OF REPAIRS.	Totals.
Clock defaced.....	81
Hands loose.....	14
Pawl stuck.....	1
Spindle leaks.....	172
Hands broken.....	83
Unsatisfactory.....	5
Stoppage.....	2
Not registering.....	21
Leak at coupling.....	36
Clock detached.....	3
Spindle stuck.....	7
Spindle broken.....	4
Ratchet broken.....	3
Clock loose.....	2
Leak at body.....	6
Rust.....	1
No force.....	2
Hands stuck.....	2
Leak at stop-cock.....	2
Clock broken.....	7
Glass broken.....	70
Cap broken.....	195
Gears did not mesh.....	2
Piston stuck.....	1
Total.....	722

Table XXIII.
METERS CHANGED.

CAUSE.	Totals.
Test 507	
Unsatisfactory..... 90	
	597
Not registering.....	411
Frozen	9
Stoppage.....	64
Leak at body.....	19
Clock defaced	14
No force.....	63
Clock broken.....	44
Relocation	15
Enlargement.....	61
Leak at spindle.....	41
Spindle stuck	5
Cylinder injured.....	1
Clock out of order.....	20
Clock lost.....	3
Leak at coupling.....	4
Disconnected	1
Cap loose.....	1
Total	1,373

Table XXIV.
METERS IN SERVICE JANUARY 31, 1898.

	DIAMETER IN INCHES.								Totals.
	6	4	3	2	1½	1	¾	⅝	
Worthington.....	2	20	34	160	125	631	434	16	1,422
Crown	7	43	54	86	162	371	460	1,227	2,410
Hersey.....		5	12	23	41	79	184	19	363
Metropolitan.....				4	18	118	543	1	684
Thomson								3	3
B. W. W.....							42		42
Gem.....	1	5							6
Ball & Fitts.....			1	1					2
Champion.....							1		1
Torrent.....	1								1
Lambert								1	1
Empire.....							1		1
Nash								1	1
Total.....	11	73	101	274	346	1,199	1,665	1,268	4,937

Table XXV.
METERS AT FACTORY FOR REPAIRS, JANUARY 31, 1898.

	DIAMETER IN INCHES.						Totals.
	3	2	1½	1	¾	⅝	
Metropolitan				8	58		66
Crown				2	2	13	17
Hersey				1			1
Worthington		1	1	3			5
Total		1	1	14	60	13	89

Table XXVI.

METERS AT DEPARTMENT SHOP, JANUARY 31, 1898.

	DIAMETER IN INCHES.								Totals.
	6	4	3	2	1½	1	¾	⅝	
Worthington		3	1	5	3	8	12	8	40
Crown		2		2	2	4	12	102	124
Hersey				1	2	2	3	1	9
Metropolitan					2	4	39	2	47
B. W. W.							1		1
Thomson				2	3	2	6	8	21
Ball & Fitts						1	5	1	7
Empire							1		1
Gem	1		2	2					5
Nash								1	1
Lambert								1	1
Proportional							1		1
Niagara								1	1
Duplex						1			1
Beck & Co.								1	1
Equitable							1		1
Undine							1	4	5
Spooner								1	1
Desper								2	2
Balance valve								1	1
Tremont						1		1	2
No name								1	1
Totals	1	5	3	12	12	23	82	136	274

Respectfully submitted,

J. H. CALDWELL,

General Superintendent Income Division.

REPORT OF THE DISTRIBUTION DIVISION.

OFFICE OF SUPERINTENDENT OF DISTRIBUTION DIVISION,
710 ALBANY STREET, BOSTON, February 1, 1898.

HON. JOHN R. MURPHY,

Water Commissioner :

I herewith submit the annual report of the Distribution Division for the year ending January 31, 1898.

In accordance with instructions received from you on January 5, 1898, the name of this division was changed from that of the Eastern Division to the Distribution Division.

The taking, by the Metropolitan Water Board on January 1, 1898, of certain portions of the Western and Mystic Divisions will necessitate a revision in our records, so that the summaries of pipes and fixtures in use will represent what belongs to the Distribution Division as it stands to-day, exclusive of what has been taken by the State.

As this division supplied Somerville, Chelsea and Everett for eleven months of the year, I shall include the usual yearly statement of what has been done in these cities. This will appear apart from that which concerns the city of Boston.

MAIN PIPE.

City of Boston. — There were laid during the year, in connection with the distribution system of the city of Boston, 28.2 miles of main pipe. Of this amount 5,601 feet were private mains, laid for various parties, and 2,093 feet were hydrant, blow-off and reservoir pipes. These two items are not included in the total length of our system. The total amount laid also embraces 948 feet of main pipe lowered, which, although it does not effect the total length of our system, represents an amount of labor greater than that usually involved in ordinary pipe-laying.

Seven and five-tenths miles of pipe were abandoned, which, with the amount taken by the Metropolitan Water Board, makes the total length of our distribution system 666.2 miles.

Of the 28.2 miles laid, 7 miles were relaid, a much greater amount than has been customary in previous years.

A most helpful device in the form of a portable steam-boiler, having arrangements for thawing the frozen earth, was

introduced this year, enabling us to carry on our main-pipe work during the winter without interruption from frost.

Last August we began laying the new 12-inch salt water main for the Fire Department. Starting near the corner of Atlantic avenue and Congress street, we continued through Congress street and Post-office square to Exchange place, through Exchange place and Central street to Atlantic avenue, at Long wharf. We then returned to Atlantic avenue, at Congress street, and laid in Congress street easterly to the bridge; where, on account of the weather and other obstructions, we stopped. The work will be resumed in the spring. It is necessarily a costly job, on account of its slow progress. This is occasioned by the conditions of the work, solid walls of masonry, old fire-reservoirs, steam-heating conduits and obstacles of all kinds being common occurrences. Besides this we are laying in connection with the fire-pipe a 3-inch cement-lined pipe, laid in concrete, to serve as a conduit for the electrical portion of the system.

With the exception of a short distance at the junction of Columbus avenue extension and Centre street, which has been delayed by the construction of Stony Brook conduit, the 36-inch new high-service main laid in Heath street in 1895 is now complete to a point in Geneva avenue, about seventy feet from Blue Hill avenue. Near this point the main is reduced to thirty inches in diameter. We are now engaged in laying isolated sections of it further along in Geneva avenue and in Bowdoin street, which at some future time will be connected, giving to Dorchester a most efficient high-pressure supply.

During the year an auxiliary main, 42 inches in diameter, was laid in Fisher avenue, Brookline, between Boylston street and the Fisher Hill Reservoir. This was much needed, as heretofore the high service of the city was practically dependent upon the original 30-inch main between those two points.

A 20-inch low-service main was laid through Canton street, from Albany to Tremont streets, thus giving an efficient fire service to the dangerous lumber district.

About 1,500 feet of 20-inch low-service main was laid in Border street, East Boston, also for better fire protection.

The 24-inch main laid last year through Dorchester avenue and Adams street was reduced to 20 inches, and continued this year through Adams street to Minot street, a distance of over a mile. This gives considerable increase of head to this section.

Some of the most important relaying jobs performed during

the year were State street, between Washington and Commercial streets, where the old 12-inch pipe, which was in a most deplorable condition, was replaced by a 16-inch main; Washington street, between Dover and Kneeland streets, where the old 6 and 12 inch pipes were replaced by a 16-inch main, and the dead ends at the Boston and Albany Railroad bridge connected; Maverick street, between New and Chelsea streets, where about 1,150 feet of 6-inch pipe was replaced with 16-inch; Tremont street, between Warrenton and Boylston streets, where the old 8-inch was replaced by a 12-inch, and Boylston street, between Tremont street and Park square, where the old 6-inch was replaced by a 12-inch.

In that part of Federal street which was taken for the site of the new Union Station, and in portions of the adjacent streets, it was necessary to abandon the pipes and relay in their place 16 and 12-inch mains in New Cove street.

Changes in our mains occasioned by the construction of the Subway have been carried on during the year, important among which are — Tremont street, at Court street, 185 feet of 12-inch relaid with 16-inch; Washington street, between Elm street and Dock square, 151 feet of 8-inch relaid with 12-inch; Adams square, between Devonshire street and Cornhill, 140 feet of 12-inch relaid with 12-inch; Cornhill, between Adams square and Court street, 475 feet of 12-inch relaid with 12-inch; Tremont street, at Pemberton square, 35 feet of 8-inch relaid with 8-inch; Tremont row, at Howard street, 72 feet of 4-inch relaid with 8-inch, and Court street, at Cornhill, 80 feet of 12-inch relaid with 12-inch.

In the vicinity of Hogg's bridge it was necessary to temporarily relocate our 16 and 12 inch lines to allow of the construction of Stony Brook conduit.

At Congress street, where the grade crossing is to be abolished, it was necessary to abandon our 30 and 24 inch mains in Congress and D streets, and relay them in Danby and B streets. The abandoned pipe which had been laid only a few years was taken out of the ground by contract, and has since been used in the construction of other lines. Several of the temporary lines laid during 1896, on account of the elevation of the tracks on the Providence Division of the N.Y., N.H. & H. R.R., and abandoned at a later date, were taken out of the ground during the past year, and at the present writing we are about to begin making the necessary changes in our pipes caused by the proposed elevation of the tracks on the Dedham branch of this railroad.

Somerville, Chelsea and Everett. — The distribution system has been extended by the addition of 150 feet of 1½-inch

pipe, 70 feet of 1½-inch pipe, 1,029 feet of 2-inch pipe, 20 feet of 4-inch pipe, 7,156 feet of 6-inch pipe, 1,421 feet of 8-inch pipe, 2,730 feet of 10-inch pipe, 1,050 feet of 12-inch pipe, 39 feet of 16-inch pipe and 858 feet of 20-inch pipe, making a total of 14,523 feet added to the system. Twenty-four thousand six hundred and seventy-five feet of pipe were relaid, replacing as a rule pipe of smaller sizes.

GATES OR STOP-COCKS.

City of Boston. — Five hundred and twenty-seven gates were established and 179 abandoned; of the former 11 were “blow-off” and seven private gates, and of the latter two were “blow-off” and one private gates. This would make the total number of gates in use, exclusive of “blow-off” and private gates, and also of those taken by the Metropolitan Water Board on January 1, as part of its system, 7,931. Special attention has been paid the condition of the gates this year. Our aim is to have every gate in thorough working order so in time of emergency they may not fail to operate.

Somerville, Chelsea and Everett. — In these cities 118 gates of different sizes were established.

AIR-COCKS.

City of Boston. — During the year 18 air-cocks were established in various parts of the city.

DEACON METERS.

City of Boston. — One was established in the Roxbury district and one on Deer Island.

Somerville and Chelsea. — One was abandoned in each of these cities.

HYDRANTS.

City of Boston. — Four hundred hydrants were established and 218 abandoned, making a net increase for the year of 182, and a total, exclusive of those taken by the Metropolitan Water Board on January 1, as part of its system, of 7,235.

The usual requests from the Fire Department for raising, lowering, relocating, changing style, and establishing new hydrants have been attended to promptly. These requests have become more frequent than in previous years, owing no doubt to the system now in vogue in the Fire Department, which requires a monthly report by the several District

Chiefs on the condition of the hydrants in their districts. During the winter months, the Water Department makes a daily inspection of all hydrants in the important districts of the city, and a frequent inspection in suburban parts. In addition to this a small force of men are kept employed throughout the winter in pumping water and other accumulations from the hydrant boxes, and otherwise preventing liability of delay in the operation of these important means of protection against fire. Six thousand nine hundred and seventy-four bushels of salt were purchased by this department, and delivered to the Fire Department to be used on hydrants during the cold weather.

Somerville, Chelsea and Everett. — There were established 107 post-hydrants, and 32 were abandoned, making a net increase to the system of 75.

WATER-POSTS.

City of Boston. — Five water-posts were established during the year and two abandoned, making an increase of three, and the total number in use January 31, 1898, 408. The usual attention, such as painting, new valves, hose and couplings was given them.

Somerville, Chelsea and Everett. — Three water-posts were established and two abandoned, making a net increase of one, and a total of 97 now in use in these cities.

FOUNTAINS.

City of Boston. — Three drinking fountains were established and four abandoned. One was also established for the Park Department in the North End Park. The services of two men are employed throughout the year in the care and maintenance of fountains, special attention being given to the sanitary condition of the same.

Somerville, Chelsea and Everett. — One drinking fountain was established in Everett and one abandoned in Somerville.

SERVICE-PIPES.

City of Boston. — Two thousand eight hundred and twenty service-pipes (64,128 feet) have been laid during the year, and 312 (7,072 feet) abandoned, showing a net increase of 2,508 service-pipes (57,056 feet) for the year, and making the total number of pipes now in use 82,026, with a length of 2,297,566 feet.

Under the law governing the laying out of new streets, we were obliged to lay to vacant lots 453 service-pipes, with a

length of 7,240 feet, from which no revenue is at present derived.

METERS.

On September 1, 1897, the meter service, which previous to that date was in charge of this division, was transferred to the Income Division, whose report will contain a statement of what was done during the past year.

MACHINE, CARPENTER AND BLACKSMITH SHOPS.

It has not been customary to state what work was done in these shops located at our yard, No. 710 Albany street, but, as requested by you, I give below a statement of the work performed. It does not include the small repairs. The articles manufactured are taken from the rough stock and finished ready for use. The boxes and other things made in the carpenter shop represent a small part of its work, as during a great portion of the year the force, which includes painters, is engaged on all kinds of work maintaining the property of the department. In fact, it is a very rare occurrence now to have any repairs made by outside parties, except upon wagons and harnesses.

Machine Shop. — Manufactures.

Gates, 3-inch	60
“ 4 “	113
“ 6 “	272
“ 8 “	108
“ 10 “	20
“ 12 “	24

Total	597
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Corporation cocks, $\frac{5}{8}$ -inch	2,984
“ “ $\frac{3}{4}$ “	200
“ “ 1 “	183
“ “ $1\frac{1}{2}$ “	77

Total	3,444
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Nipples, $\frac{5}{8}$ -inch.	100
“ $\frac{3}{4}$ “	100
“ 1 “	101
“ $1\frac{1}{2}$ “	175
“ 2 “	176

Total	652
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Coupling nuts, $\frac{5}{8}$ -inch.	.	.	.	.	.	.	7,113
“ “ $\frac{3}{4}$ “	.	.	.	.	.	.	177
“ “ 1 “	.	.	.	.	.	.	562
“ “ $1\frac{1}{2}$ “	.	.	.	.	.	.	202
“ “ 2 “	.	.	.	.	.	.	150
Total	.	.	.	.	.	.	8,204
Coupling tubes, $\frac{5}{8}$ -inch.	.	.	.	.	.	.	5,834
“ “ $\frac{3}{4}$ “	.	.	.	.	.	.	625
“ “ 1 “	.	.	.	.	.	.	589
“ “ $1\frac{1}{2}$ “	.	.	.	.	.	.	235
“ “ 2 “	.	.	.	.	.	.	210
Total	.	.	.	.	.	.	7,493
Male couplings, $\frac{3}{4}$ -inch.	.	.	.	.	.	.	59
“ “ 1 “	.	.	.	.	.	.	251
“ “ $1\frac{1}{2}$ “	.	.	.	.	.	.	257
“ “ 2 “	.	.	.	.	.	.	26
Total	.	.	.	.	.	.	593
Plugs, $\frac{5}{8}$ -inch.	.	.	.	.	.	.	447
“ $\frac{3}{4}$ “	.	.	.	.	.	.	100
“ 1 “	.	.	.	.	.	.	89
“ $1\frac{1}{4}$ “	.	.	.	.	.	.	16
“ $1\frac{1}{2}$ “	.	.	.	.	.	.	20
“ 2 “	.	.	.	.	.	.	16
Total	.	.	.	.	.	.	688
Air-cocks	.	.	.	.	.	.	30
Lowry hydrants	.	.	.	.	.	.	72
Boston Lowry hydrants	.	.	.	.	.	.	49
Post hydrants	.	.	.	.	.	.	248
Boston hydrants	.	.	.	.	.	.	11
Salt water hydrants	.	.	.	.	.	.	6
Hydrant wastes, large	.	.	.	.	.	.	480
Hydrant wastes, small	.	.	.	.	.	.	40
Set screws	.	.	.	.	.	.	5,268
Lowry hydrant bolts	.	.	.	.	.	.	1,124
Post hydrant bolts	.	.	.	.	.	.	232
Boston Lowry hydrant bolts	.	.	.	.	.	.	300
Sidewalk tops	.	.	.	.	.	.	3,601

Thimbles, various sizes	66
Boston Lowry extensions	38
Burnett valves	126
Two-inch female hose-couplings	173
Three-inch to 2-inch reducing plugs	47

Repairs were made on the following:

Gates of various sizes	17
Lowry hydrants	253
Boston Lowry hydrants	22
Post hydrants	16
Boston hydrants	9

Carpenter Shop — Manufactures.

Lowry hydrant boxes	159
Boston Lowry hydrant boxes	62
Post hydrant boxes	228
Boston hydrant boxes	23
Gate-boxes	579
Wooden horses	137
Paving rammers	40

Blacksmith Shop.

Picks pointed	15,000
Picks resteeled	225

MAINTENANCE.

City of Boston. — We have made 2,781 repairs on pipes during the year, for causes of which see table appended. A most interesting exhibit is our statement of miscellaneous work performed, while it does not give an idea of the expense or the difficulties attached to each one of the jobs, still it will assist in forming an idea of how a part of the department occupied its time during the year, and shows what a variety of work we are called upon to perform. Among other things, 10,268 gate locations were either marked or remarked; 9,362 gates salted an account of cold weather; 4,224 hydrant boxes cleaned out; 1,646 hydrants repaired in service; 1,257 street repairs; 1,004 stop-cock or gate-boxes repaired in service; 953 examinations caused by false reports; 833 meters hayed on account of cold weather; 808 hydrants hayed for same reason; 665 water posts repaired; 635 hydrant boxes repaired in service, and 426 sidewalk up-rights raised or lowered.

Those parts of the various bridges over which our main pipes are carried have been given unusual attention this year. The supports were strengthened and renewed; the boxes covering the pipes repaired and painted, and in some instances replaced entirely. All excavations in the streets that were likely to expose our pipes were carefully inspected, with a view of protecting said pipes from damage, and in all cases where corporations were at work laying conduits, etc., in the streets, an inspection was made to prevent encroachment and the covering of our pipes by said corporations.

HARBOR SERVICE.

City of Boston. — Although no additional mains have been laid in the harbor this year, considerable attention has been given to the protection of the existing ones. Bulkheads have been built, and during the winter months it was necessary on several occasions to replace the earth which was washed away by the sea, thereby exposing our pipes to danger of breaking and freezing. As a precaution against freezing during the cold spells a small stream was allowed to run continuously on Rainsford's and Galloupe's Islands. Located in various parts of the harbor are signs, warning ships not to anchor in the vicinity of our pipes. These have been repaired and painted.

RESERVOIRS AND STAND-PIPES.

East Boston. — This reservoir is in good condition.

Parker Hill. — The keeper's house has been thoroughly renovated, and with the rest of the property is in first-class condition.

South Boston. — This reservoir is abandoned, and the connections with our system removed.

College Hill. — Up to January 1, 1898, the time when this property was taken by the Metropolitan Water Board, this reservoir was maintained in its usual good condition, and handed over to the State in first-class order. About 300 feet of roadway on the grounds was macadamized.

Fisher Hill and Brookline. — These two basins came under the care of this division January 1, 1898, and will require considerable attention before we can safely say they are in good condition. We are now repairing the buildings.

Breed's Island Stand-pipe. — The extensive repairs reported as in progress in our last statement have been completed, and the tower is now in the best condition.

Mt. Bellevue Stand-pipe. — This building has been thoroughly overhauled. New floors were laid, a copper sheathing placed between the upper and lower floors of the observatory, guard rails placed around the windows, the masonry pointed and the land surrounding the building graded. During the summer season the tower is well patronized for observation purposes, it being located on the highest land in the city of Boston. A keeper was placed in charge of the grounds, with good results.

FIRE RESERVOIRS.

During the year the following fire reservoirs were abandoned on account of the operations of this department.

Washington street, at Common.

“ “ “ Motte.

“ “ “ Davis.

East Canton street, opposite No. 89.

PUMPING STATIONS.

Mystic. — During that portion of the past year when this station was in our charge, Engine No. 3 was stopped and thoroughly repaired. The pump plungers were taken out and cylinders scraped of corrosion and painted inside on the steam end. Three new piston valves and two new valve stems were set in place of old ones. The air-pump beams were taken out, relined and rebabbited, and pumps fastened to foundations. The lagging on all the pumps was repaired.

The following is a statement of the time each engine was run up to December 31, 1897:

Engine No. 1, 2,365 hours, 15 minutes.

“ “ 2, 1,500 “ 15 “

“ “ 3, 1,308 “ 50 “

“ “ 4, 6,420 “

Number of gallons of water pumped by all four engines 4,404,156,637.

In boilers Nos. 1, 2 and 3 it was found necessary to reline the fire boxes and place new arches over the fire doors. Three new sets of head plates were also required for the same boilers. A new brick floor was put in the fire-room. The bridge at the pumping station was entirely rebuilt and painted, and the dwelling-house and other buildings located on the grounds were thoroughly overhauled and put in first-class condition, preparatory to their transfer to the State.

West Roxbury. — Two new air-pumps were connected with the pumping apparatus, thus stopping the disagreeable noise

in the pipes so frequently complained of in the past. Connection was made with the sewer in Washington street, giving to the station a much-needed drainage.

Wayne street.— This station will in all probability be abandoned some time during the year, and at present answers all requirements.

East Boston.— With the exception of placing new tubes in the boilers nothing was done at this station; it being in a generally good condition.

YARDS.

Albany street.— Although greatly cramped last year, this year the City Hospital took quite a slice off the yard for the purpose of building a coal-pocket, and this contracts our working space to a degree where it is almost impossible to move around in the busy season. The stable which was in process of reconstruction at the writing of my last report was completed during the year, and we now have an almost model stable. A large stationary derrick was erected in the yard which greatly facilitates the loading and unloading of heavy castings. Our large stock of valuable patterns have been given space on the upper floor of the machine-shop and arranged, tagged and catalogued under the direction of the City Engineer. The buildings have been painted and repaired where necessary, and extra accommodations prepared for the meter service of the Income Department.

Charlestown.— Extensive repairs have been made here. The fence has been entirely rebuilt; the buildings painted, new doors and floors placed in the stable and new window frames in the repair shop.

West Roxbury.— The removal to more commodious quarters recommended in last year's report has been made, and the beneficial results are most apparent. A two and one-half story wooden frame building serving as an office, workshop and stable, surrounded by a large and roomy yard, was secured on Williams street, West Roxbury, a short distance from Washington street. This is a much more central location than the old one on Seaverns avenue, and will undoubtedly answer the requirements of this large and growing district for some time to come.

Dorchester, Brighton and East Boston have all received some attention as regards their condition, and are at present sufficiently equipped to handle the work in their districts. The Brighton District will, however, soon need better accommodations.

MYSTIC LAKE AND CONDUIT.

Constant attention was paid during the year to the condition of the Lake and the streams entering it, with a view to removing as far as possible all foreign bodies. The conduit was flushed out several times, scraped and cleansed, and new planking placed on the bridge at the Lake. For statistics of the rain-fall, and rise and fall of water in the Lake, see Engineer's report.

WATER-SOURCES.

The following is a summary of the inspection work for the year 1897: Total number of cases inspected, 382. The present condition of all inspected cases is: Present safe, 279; seem safe, 9; suspected, 8; unsatisfactory, 17; remedied, 69. Four legal notices were served.

ELECTROLYSIS.

Electrical tests have been made throughout the whole city. The object of these tests was first to determine the districts, if any, in which electrolytic action is marked, and then to ascertain the extent to which it is going on. The work so far has been confined principally to finding the potential differences between the pipes and the adjacent ground, as they furnish the information from which conclusions as to relative rates of electrolytic decomposition can be most readily drawn. The results obtained are merely comparative ones, but serve as a guide to the correct examination of the system.

DEACON AND WASTE SERVICE.

The Deacon meter service has been continued during the past year with good results. Sixty-two of these meters were in operation for a period of seven months and twenty-three days, and 731 readings and tests were made on 150 sections. Seven hundred and eleven diagrams, showing results of 355 readings of 24 hours, and 356 night tests, from 11 P.M. to 4 A.M., were delivered to the Engineer for compilation.

The inspection of premises for waste was continued during the entire year, principally in streets where the consumption of water had been shown by the Deacon meters to be excessive. The number of premises inspected during the year was 47,778; the number of streets, 823; waste reports

made, 7,652; defective fixtures discovered, 9,211; premises re-examined, 11,121.

Appended you will find tables showing details of the work performed.

Yours respectfully,

HUGH McNULTY,

General Superintendent Distribution Division.

TABLES SHOWING DETAILS OF WORK PERFORMED IN CITY OF BOSTON.

Table showing Total Length of B. W. W. System, January 31, 1897. Length of Distribution Mains laid or relaid, and abandoned during the Year 1897. Amount taken by the Metropolitan Water Board, January 1, 1898, and the Length of the Distribution System of the City of Boston, January 31, 1898.

DIAMETER OF PIPES IN INCHES.																		Totals.
60	48	42	40	36	30	28	24	20	16	12	10	8	6	4	3	2 "		
Total connected with works, January 31, 1897.....	266	49,912	15,705	24,530	35,778	98,514	244	80,608	73,515	120,331	932,802	67,476	442,381	1,383,387	141,630	8,373	3,745	3,479,206
Length laid or relaid during the year.....	....	....	1,108	....	5,452	2,082	....	3,050	9,578	9,302	40,560	5,416	20,567	42,591	427	13	....	140,146
Length abandoned during the year.....	....	....	....	....	....	949	....	555	378	503	7,927	800	1,287	14,826	12,188	480	....	39,893
Amount taken by Metropol- itan Water Board from Western Division.....	266	15,511	....	1,435	1,166	2,140	....	....	....	20	2,043	....	....	360	....	....	....	22,941
Amount taken by Metro- politan Water Board from Eastern Division (includ- ing old Mystic) .....	....	730	....	....	2,357	20,010	....	10,820	....	....	2,125	....	1,105	1,435	120	....	....	38,732
Total length of Distribution System of City of Boston, January 31, 1898 .....	....	33,671	16,813	23,104	37,677	77,497	244	72,283	82,715	129,110	961,267	72,092	460,556	1,409,357	129,749	7,906	3,745	3,517,786 or 666.2 m.

Statement of Service Pipes Laid and Abandoned during the Year ending January 31, 1898.

	CITY PROPER.		SOUTH BOSTON.		EAST BOSTON.		ROXBURY.		DORCHESTER.		WEST ROXBURY.		BRIGHTON.		CHARLES- TOWN.		TOTALS.	
	Number of services.	Length in feet.	Number of services.	Length in feet.	Number of services.	Length in feet.	Number of services.	Length in feet.	Number of services.	Length in feet.	Number of services.	Length in feet.	Number of services.	Length in feet.	Number of services.	Length in feet.	Number of services.	Length in feet.
8-inch laid.....	1	49	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	49
6 " ".....	3	66	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	78
4 " ".....	44	1,099	2	31	1	16	1	24	.....	.....	.....	.....	3	48	1	6	52	1,224
3 " ".....	13	283	1	16	.....	.....	4	117	.....	.....	.....	.....	.....	.....	2	44	20	460
3 " abandoned.....	1	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	18
2 " laid.....	19	524	2	20	2	5	1	24	.....	.....	.....	.....	1	15	.....	.....	25	588
2 " abandoned.....	2	21	.....	.....	.....	.....	1	17	.....	.....	.....	.....	.....	.....	.....	.....	3	38
1½ " laid.....	26	688	.....	.....	.....	.....	5	125	4	105	5	78	2	56	1	32	43	1,084
1½ " abandoned.....	3	39	.....	.....	.....	.....	1	10	.....	.....	.....	.....	.....	.....	.....	.....	4	49
1¼ " laid.....	20	647	4	126	.....	.....	6	170	2	60	2	17	3	16	1	25	38	1,061
1¼ " abandoned.....	2	51	1	19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	70
1 " laid.....	77	1,923	7	165	3	88	37	1,029	5	149	6	115	7	169	4	160	146	3,798
1 " abandoned.....	27	599	1	16	.....	.....	6	98	1	3	2	27	.....	.....	1	32	38	775
¾ " laid.....	24	800	6	189	2	57	21	675	2	31	3	65	2	42	3	56	63	1,915

Statement of Service Pipes Laid and Abandoned. — *Concluded.*

	CITY PROPER.		SOUTH BOSTON.		EAST BOSTON.		ROXBURY.		DORCHESTER.		WEST ROXBURY.		BRIGHTON.		CHARLES- TOWN.		TOTALS.	
	Number of services.	Length in feet.	Number of services.	Length in feet.	Number of services.	Length in feet.	Number of services.	Length in feet.	Number of services.	Length in feet.	Number of services.	Length in feet.	Number of services.	Length in feet.	Number of services.	Length in feet.	Number of services.	Length in feet.
3-inch abandoned	10	132	.....	.....	.....	2	23	210	2	210	1	.....	.....	.....	1	33	16	458
4 " laid.....	158	2,482	140	3,504	75	2,126	572	11,865	949	21,363	360	8,633	128	2,804	46	1,004	2,428	53,871
4 " abandoned	132	3,070	18	479	3	146	40	855	14	372	9	75	1	16	5	155	222	5,168
4 " " .....	.....	.....	4	111	5	122	7	120	1	17	.....	.....	.....	.....	8	126	25	496
Total laid	385	8,561	162	4,051	83	2,292	647	14,029	962	21,708	376	8,908	147	3,252	58	1,327	2,820	64,128
Total abandoned.....	177	3,990	24	625	8	268	57	1,123	18	602	12	102	1	16	15	346	312	7,072
Net increase.....	208	4,571	138	3,426	75	2,024	590	12,906	944	21,106	364	8,806	143	3,236	43	981	2,508	57,056

Statement of Location, Size and Number of Feet of Main Pipe Relaid during the Year ending January 31, 1898.

NOTE.—C. P., indicates City Proper; Rox., Roxbury; W. R., West Roxbury; Bri., Brighton; Dor., Dorchester; So. B., South Boston; E. B., East Boston; Chn., Charlestown.

In what Street.	Between what Streets.	District.	Size.	Length.	Original Size.
Tremont st.	Opposite Common st.	C. P.	30-in.	11	30-in.
Danby st.	C and D sts.	So. B.	"	526	24 and 30 in.
	Total 30-inch			537	
Essex st.	At Washington st.	C. P.	24-in.	5	24-in.
Adams st.	" Tenen brook.	Dor.	"	72	12-in.
B st.	Danby and Congress sts.	So. B.	"	985	24 and 30 in.
Danby st.	B and C sts.	"	"	542	"
	Total 24-inch			1,604	
Dover st.	At Washington st.	C. P.	20-in.	12	20-in.
Tremont st.	" School st.	"	16-in.	21	12-in.
Boston Common ...	Opposite Mason st.	"	"	5	8-in.
Tremont st.	School st. and Scollay sq.	"	"	424	12-in.
Washington st.	Kneeland and Dover sts.	"	"	2,580	12 and 6 in.
State st.	Washington and Commercial sts. ...	"	"	1,174	12-in.
Commercial st.	At State st.	"	"	15	"
Cove st.	Kneeland and Essex sts.	"	"	860	6-in.
Tremont st.	At Court st.	"	"	185	12-in.
Blue Hill ave.	Walk Hill and Fessenden sts.	Dor.	"	8	16-in.
Centre st.	At Hogg's Bridge	Rox.	"	210	"
" "	" " "	"	"	160	"
Maverick st.	New and Chelsea sts.	E. B.	"	1,154	6-in.
	Total 16-inch			6,796	
Adams sq.	Devonshire st. and Cornhill.	C. P.	12-in.	140	12-in.
Washington st.	Elm st. and Dock sq.	"	"	151	8-in.
Tremont st.	Opp. Common st.	"	"	12	12-in.
Dover st.	At Washington st.	"	"	82	8-in.
India st.	" State st.	"	"	22	12-in.
	Carried forward.			407	

Statement of Location, Size, etc. — *Continued.*

In what Street.	Between what Streets.	District.	Size.	Length.	Original Size.
	<i>Brought forward</i>			407	
Washington st....	At State st.	C. P.	12-in.	12	6-in.
Hanover st.....	" Court "	"	"	32	12-in.
" "	" " "	"	"	33	"
Harrison ave.....	" Asylum st.....	"	"	6	"
" "	" Lovering pl.....	"	"	5	"
Boylston st.....	Park sq. and Tremont st.....	"	"	775	6-in.
Atlantic ave.....	At Congress st.....	"	"	18	12-in.
Washington st....	Union Park and Waltham sts.....	"	"	289	6-in.
Cove st.....	Kneeland and Federal sts.	"	"	905	12-in.
Stoddard st.....	Court and Howard sts.....	"	"	166	4-in.
Howard st.....	Stoddard and Somerset sts.....	"	"	144	6-in.
Tremont st.....	Boylston and Warrenton sts.....	"	"	925	8-in.
Cornhill.....	Adams sq. and Court st.....	"	"	475	12-in.
Court st.....	At Cornhill.....	"	"	80	"
Sydney st.....	Romsey st. and Crescent ave.....	Dor.	"	381	6-in.
Walk Hill st.....	At Blue Hill ave.....	"	"	30	12-in.
Blue Hill ave.....	Esmond and Glenway sts.....	"	"	760	10-in.
Walk Hill st.....	N. W. cor. Blue Hill ave.....	"	"	20	12-in.
Morton st.....	West of Norfolk st.....	"	"	17	"
Dorchester ave.....	At Edson green.....	"	"	7	"
Ashmont st.....	Near Washington st.....	"	"	16	"
Geneva ave.....	West of Columbia st.....	"	"	21	"
Savin Hill ave.....	Endleigh st. and Railroad.....	"	"	802	6-in.
Wesley ave.....	From Savin Hill ave.....	"	"	50	"
Savin Hill ave.....	" Grampian way.....	"	"	550	"
Grampian way.....	Savin Hill ave. and Evandale terrace.....	"	"	679	"
Barry st.....	From Barrington st.....	"	"	23	6-in.
Columbia road	Washington st. and Geneva ave...	"	"	24	12-in.
Geneva ave.....	" " Wilder st.	"	"	125	6-in.
Clifton st.....	At Dudley st.....	"	"	6	12-in.
East First st.....	" City Point pl.....	So. B.	"	5	"
Walnut pk.....	Washington st. and Walnut ave...	Rox.	"	20	4-in.
Blue Hill ave.....	Georgia st. and Geneva ave.....	"	"	14	12-in.
	<i>Carried forward</i>			7,822	

Statement of Location, Size, etc. — *Continued.*

In what Street.	Between what Streets.	District.	Size.	Length.	Original Size.
	<i>Brought forward</i>			7,822	
Centre st.	At Hogg's Bridge.....	Rox.	12-in.	210	12-in.
“	“ “ “	“	“	220	“
Amory st.....	“ “ “	“	“	80	“
Heath st.....	Lawn and Cranford sts.	“	“	96	8-in.
West Walnut pk....	Washington st. and Columbus ave.,	“	“	202	6-in.
Marcella st.....	“ “ Highland st....	“	“	1,353	“
Florence st.....	Brooks and Ashland sts.	W. Rox.	“	20	12-in.
Commonwealth ave.,	Harvard ave. and Allston st.....	Bri.	“	280	6-in.
Oakland st.	Washington and Faneuil sts.....	“	“	744	“
Chelsea st.	Junction of Joiner st.....	Chn.	“	12	12-in.
Maverick st.	New and Chelsea sts.	E. B.	“	188	6-in.
Border st.....	Intersection of Maverick st.	“	“	20	12-in.
Marginal st.....	“ “ Orleans st.....	“	“	9	“
Sumner st.....	“ “ “ “	“	“	4	“
Meridian st.....	Junction of Maverick st.	“	“	7	“
Marginal st.....	Cottage and Ruth sts.....	“	“	786	6-in.
Orleans st.....	Marginal and Sumner sts.....	“	“	600	“
Fisher ave.....	At Fisher Hill Reservoir	B'kline.	“	43	12-in.
	Total 12-inch			12,696	
Compton st.....	Tremont and Washington sts.....	C. P.	10-in.	1,127	6-in.
“	At Washington st.	“	“	34	“
Joiner st.....	Chelsea and Park sts.....	Chn.	“	209	“
	Total 10-inch			1,370	
Boylston st.....	At Washington st.....	C. P.	8-in.	10	8-in.
Congress st.....	Atlantic ave. and High st.	“	“	390	6-in.
Pelham st.....	Washington and Shawmut ave....	“	“	449	4-in.
Avery st.....	Mason and Washington sts.....	“	“	410	6-in.
Tremont row.....	At Howard st.....	“	“	72	4-in.
Pemberton sq.....	“ Tremont st.....	“	“	35	8-in.
Quincy st.....	“ Bellevue st.....	Dor.	“	8	“
Bernard st.....	“ Kerwin st.....	“	“	8	“
McLellan ave.....	Blue Hill ave. and Erie st.....	“	“	168	6-in.
	<i>Carried forward</i>			1,550	

Statement of Location, Size, etc. — *Continued.*

In what Street.	Between what Streets.	District.	Size.	Length.	Original Size.
	<i>Brought forward</i>			1,550	
Hilton st.....	From Swett st.....	Rox.	8-in.	300	4-in.
Green st.....	High and Main sts.....	Chn.	"	190	3-in.
Hull st.....	Chelsea and Vine sts.....	"	"	3	8-in.
Pine st.....	Off Vine st.....	"	"	3	"
Maverick st.....	New and Chelsea sts.....	E. B.	"	12	6-in.
Liverpool st.....	Intersection of Maverick st.....	"	"	6	8-in.
	Total 8-inch.....			<u>2,064</u>	
Garland st.....	At Washington st.....	C. P.	6-in.	24	4-in.
Lucas st.....	" " "	"	"	27	"
Cherry st.....	" " "	"	"	27	"
Davis st.....	" " "	"	"	14	"
Asylum st.....	" " "	"	"	6	"
Bumstead court....	" Boylston st.....	"	"	7	"
Lovering pl.	Washington and Harrison ave....	"	"	340	"
Asylum st.....	" " " "	"	"	346	"
Boylston pl.....	From Boylston st.....	"	"	20	"
Ashton pl.....	Off Charles st.....	"	"	29	"
Webster ave.....	At Unity st.....	"	"	17	"
Unity court.....	" " "	"	"	12	"
Wiget st.....	Salem and North Margin sts.....	"	"	250	"
Gray st.....	Clarendon and Berkeley sts.....	"	"	630	"
Pelham-st. pl.....	From Pelham st.....	"	"	22	"
Carlton st.	At West Newton st.....	"	"	36	"
Exeter pl.....	Harrison ave. and Chauncy st....	"	"	180	"
Paul st.	Tremont and Emerald sts.....	"	"	480	"
Alden st.....	Court and Sudbury sts.....	"	"	240	"
Tamworth st.	At La Grange st.....	"	"	15	"
Lawrence st.....	Berkeley and Dartmouth sts.....	"	"	1,260	"
Haymarket pl.	From Avery st.....	"	"	249	"
Carlton st.	At Berwick pk.	"	"	50	"
Berwick pk.	At Carlton st.	"	"	27	"
Van Rensselaer pl..	Off Tremont st.	"	"	22	"
Seaver pl.....	" " "	"	"	3	6-in.
	<i>Carried forward</i>			<u>4,333</u>	

Statement of Location, Size, etc.— *Continued.*

In what Street.	Between what Streets.	District.	Size.	Length.	Original Size.
	<i>Brought forward</i>			4,333	
Clifton st.....	At Dudley st.	Dor.	6-in.	36	4-in.
Blue Hill ave.....	At Glenway st.	"	"	44	6-in.
Virginia st.	At Davenport ave.....	"	"	4	"
Holden pl.	From Dudley st.....	"	"	26	4-in.
Fenton pl.	From Greenwich st., north side ...	"	"	27	"
" "	" " " south "	"	"	4	"
Savin Hill ave.....	At Grampian way	"	"	26	6-in.
Bispham st.	From Park st.....	"	"	174	3-in.
Everett ave.	From Stoughton st.	"	"	4	6-in.
E st	North of Sixth st.	So. B.	"	3	"
Bowen st.....	At E st.	"	"	18	"
Gold st.	" " "	"	"	50	4-in.
" "	At F st.....	"	"	52	"
Broadway	At B st.	"	"	8	6-in.
Gold st.	D and Dorchester sts.....	"	"	1,597	4-in.
Mercer st.....	At Vale st.	"	"	14	6-in.
Beckler ave.....	From K st.	"	"	254	4-in.
G st.....	At James ave.	"	"	5	6-in.
Gates st.	Dorchester and Telegraph sts.....	"	"	440	4-in.
Gates st.	Telegraph and Eighth sts.....	"	"	616	"
Silver st.	Dorchester and G sts.....	"	"	658	"
Gold st.	B st. and R.R.	"	"	151	"
Dacia pl.	From Dacia st.....	Rox.	"	34	"
Dacia terrace	" " "	"	"	36	"
Willow pk.....	Off Shawmut ave.....	"	"	168	3 and 6 in.
Adams pl.....	From Williams st.	"	"	15	4-in.
Kensington pk.	Off Warren st.....	"	"	52	"
Centre st. pl.	" Centre "	"	"	140	"
Bromley st.	At Old Heath st.	"	"	12	6-in.
Walnut pk.....	Washington st. and Walnut ave....	"	"	1,184	4-in.
West Walnut pk. ...	" " " Columbus ave.	"	"	11	12-in.
Custer st.	At Arborway	W. Rox.	"	3	6-in.
Sycamore st.....	" Ridge st.	"	"	10	"
Concord ave.....	Concord and Jefferson sts.	Chn.	"	24	4-in.
	<i>Carried forward</i>			10,233	

Statement of Location, Size, etc. — *Concluded.*

In what Street.	Between what Streets.	District.	Size.	Length.	Original Size.
	<i>Brought forward</i>			10,233	
Sullivan st.....	Russell and Bunker Hill sts.	Chn.	6-in.	217	4-in.
Sullivan st.....	Off Main st.....	"	"	48	"
Stacey st.....	" " "	"	"	36	"
Ellwood st.....	" " "	"	"	24	"
Hudson st.....	" Chelsea st.	"	"	16	3-in.
Tufts court.....	" Tufts st.	"	"	86	4-in.
Tufts court.....	" Corey st.....	"	"	24	"
Ludlow st.	" Mead st.....	"	"	30	"
Hull st.....	Chelsea and Vine sts.....	"	"	209	"
Pine st.....	Off Vine st.	"	"	36	"
Auburn ave.	" Auburn st.....	"	"	25	"
Avon pl.	Off Sullivan st.....	"	"	13	3-in.
Wall st.	" " "	"	"	29	4-in.
Mason ct.....	" " "	"	"	16	"
Wesley st.....	" " "	"	"	15	"
Linwood pl.....	Off Main st.....	"	"	54	"
London st.....	Intersection of Maverick st.....	E. B.	"	11	6-in.
Havre st.....	" " " "	"	"	12	"
Paris st.....	" " " "	"	"	16	"
Murray ct.....	Off Orleans st.....	"	"	40	4-in.
Boston Dye Wood Company Wharf..	" Border st.....	"	"	20	"
Dry Dock Company Wharf.....	" " "	"	"	20	"
Haynes st.	" Orleans st.....	"	"	35	"
Sumner st.	New and Border st.....	"	"	34	6-in.
	Total 6-inch			11,249	
Trumbull st.	At Newland st.....	C. P.	4-in.	8	4-in.
Mason ct.	Off Sullivan st.....	Chn.	"	4	"
Wesley st.....	" " "	"	"	5	"
Exeter pl.....	" " "	"	"	6	3-in.
	Total 4-inch			23	
Hudson st.	Off Chelsea st.....	Chn.	3-in.	4	3-in.
Avon pl.	" Sullivan st.....	"	"	9	"
	Total 3-inch			13	

**Statement of Location, Size and Number of Feet of
Main Pipe Extended during the Year ending Jan-
uary 31, 1898.**

In what Street.	Between what Streets.	District.	Size.	Length.
Fisher ave.	Boylston st. and Reservoir	Brookline,	42-in.	1,108
Boylston st.	Opposite Fisher ave.	"	36-in.	18
Fisher ave.	Boylston st. and Reservoir	"	"	124
Old Heath st.	New Heath and Columbus ave.	Rox.	"	547
Blue Hill ave.	Geneva ave. and Georgia st.	"	"	69
Georgia st.	Blue Hill and Elm Hill ayes.	"	"	1,117
Elm Hill ave.	Georgia and Ruthven sts.	"	"	63
Ruthven st.	At Elm Hill ave.	"	"	73
Walnut pk.	Walnut ave. and Washington st.	"	"	1,280
West Walnut pk.	Washington st. and Columbus ave.	"	"	166
Columbus ave.	West Walnut pk. and Stony brook.	"	"	1,995
	Total 36-inch			<u>5,452</u>
Fisher ave.	Boylston st. and Reservoir	Brookline,	30-in.	32
Geneva ave.	Olney and Bowdoin sts.	Dor.	"	610
Bowdoin st.	Homes ave. and Westville st.	"	"	662
C st.	At Danby st.	So. B.	"	7
Geneva st.	From Blue Hill ave.	Dor.	"	68
Blue Hill ave.	Geneva ave. and Georgia st.	Rox.		166
	Total 30-inch			<u>1,545</u>
Adams st.	Junction Neponset ave.	Dor.	24-in.	24
Danby st.	D and E sts.	So. B.	"	71
South st.	Arnold Arboretum and Morton st.	W. R.	"	508
Roadway of Arnold Arboretum (con- tract)	Westerly from South st.	"	"	623
South st. (contract) ..	Northerly from entrance to Arnold Arboretum	"	"	220
	Total 24-inch			<u>1,446</u>
Canton st.	Albany and Tremont sts.	C. P.	20-in.	2,554
Tremont st.	At West Canton st.	"	"	32
Adams st.	Neponset ave. and Minot st.	Dor.	"	5,474
Border st.	Maverick st. and Central sq.	E. B.	"	1,506
	Total 20-inch			<u>9,566</u>

Statement of Location, Size, etc. — *Continued.*

In what Street.	Between what Streets.	District.	Size.	Length.
Blue Hill ave.....	Fessenden and Walk Hill sts.	Dor.	16-in.	211
Adams st.	Junction Neponset ave.	"	"	56
" "	At Minot st.	"	"	5
Stoughton st.	Hancock and Salcombe sts.	"	"	1,315
Talbot ave.	West of Bernard st.	"	"	57
Vale st.	Dorchester and Mercer sts.	So. B.	"	808
Walnut pk.	Walnut ave. and Washington st.	Rox.	"	6
Blue Hill ave.	Georgia and Geneva ave.	"	"	7
Border st.	Maverick st. and Central sq.	E. B.	"	41
	Total 16-inch			2,506
Washington st.	Over B. & A. R.R. bridge.	C. P.	12-in.	115
Grenville pl.	At Columbus ave.	"	"	40
Purchase st.	High and Oliver sts.	"	"	113
Portland st.	Travers and Merrimac sts.	"	"	20
Tremont st.	At West Canton st.	"	"	13
Shawmut ave	" " "	"	"	27
Washington st. ..	" " "	"	"	32
Harrison ave.	" East Canton st.	"	"	17
Albany st.	" " "	"	"	5
Portland st.	Travers and Causeway sts.	"	"	285
Spencer st.	From W. Park st.	Dor.	"	271
Sydney st.	Romsey st. and Crescent ave.	"	"	671
Geneva st.	West of Columbia st.	"	"	356
Gramplan way	Savin Hill ave. and Evandale terrace,	"	"	507
Barry st.	From Barrington st.	"	"	294
Romsey st.	" Sydney st.	"	"	19
Dorchester way	Dorchester ave. and Boston st.	"	"	1,210
Westville st.	Geneva ave. and Ditson st.	"	"	232
Bloomfield st.	Geneva ave. and Greenbrier st.	"	"	316
Geneva ave.	Waldeck st. and Dorchester ave.	"	"	1,232
Ponemah st.	Blue Hill ave. and Duke st.	"	"	995
Spencer st.	Wheatland and Talbot aves.	"	"	40
Kilton st.	From Washington st.	"	"	84
Washington st.	Fairmount and Codman sts.	"	"	417
	<i>Carried forward.</i>			7,311

Statement of Location, Size, etc. — *Continued.*

In what Street.	Between what Streets.	District.	Size.	Length.
	<i>Brought forward</i>			7,311
Fairmount ave.	Washington and Ogden sts.	Dor.	12-in.	127
Ogden st.	At Fairmount ave.	"	"	4
Park st.	Waldeck and Greenbrier sts.	"	"	60
Woodlawn ave.	W. Selden and Delhi sts.	"	"	204
Oakland st.	Regent road and Haven st.	"	"	1,188
Richmond road	Randolph road and Oakland st.	"	"	652
Capen st.	Norfolk and Evans sts.	"	"	260
Romsey st.	W. of Sidney st.	"	"	235
Kilton st.	From Washington st.	"	"	305
Adams st.	At Lonsdale st.	"	"	17
Woodlawn ave.	From W. Selden st.	"	"	195
Bakersfield st.	Stoughton and Willis sts.	"	"	812
Geneva ave.	Corona st. and Homes ave.	"	"	656
Bernard st.	Nightingale and W. Park sts.	"	"	630
" "	At Culvert.	"	"	29
Normandie st.	From Lawrence ave.	"	"	270
Massachusetts ave. ...	Boston and Clapp sts.	"	"	328
Danby st.	D and E sts.	So. B.	"	512
E st.	Danby and Congress sts.	"	"	966
Congress st.	E st. and L-st. bridge	"	"	862
East First st.	P and Q sts.	"	"	530
Q st.	First and Second sts.	"	"	40
N st.	At E. First st.	"	"	41
Shirley st.	Roswell and Clifton sts.	Rox.	"	24
Columbus ave.	West Walnut pk. and Dimock st.	"	"	882
Calumet st.	From Hillside st.	"	"	347
Vancouver st.	Ruggles st. and Huntington ave.	"	"	270
Centre st.	At Cedar st.	"	"	3
Calumet st.	From Hillside st.	"	"	45
Ritchie st.	At Centre st.	"	"	22
Heath st.	At Day st.	"	"	95
Columbus ave.	Dimock st. and Stony brook	"	"	1,123
Heath st.	Lawn and Day sts.	"	"	550
Blue Hill ave.	Geneva ave. and Georgia st.	"	"	34
	<i>Carried forward</i>			19,629

Statement of Location, Size, etc. — *Continued.*

In what Street.	Between what Streets.	District.	Size.	Length.
	<i>Brought forward</i>			19,629
Heath st.	Lawn and Cranford sts.	Rox.	12-in.	174
Basswood st.	From South Huntington ave.	"	"	473
So. Huntington ave. ..	Floyd and Bynner sts.	"	"	805
" " " ...	From Heath st.	"	"	950
Cranford st.	Heath and Floyd sts.	"	"	225
Arborway.	Hampstead road and Centre st.	W. Rox.	"	334
"	Washington and South sts.	"	"	319
Merlin st.	Centre and Weld sts.	"	"	199
Hyde Park ave.	Walk Hill and Patten sts.	"	"	310
Colberg ave.	Malcom and Cornell sts.	"	"	146
" "	Montello and Malcom sts.	"	"	96
Park st.	Centre st. and Clement ave.	"	"	117
Beech st.	Near Washington st.	"	"	96
" "	At Belgrade ave.	"	"	96
Centre st.	Fletcher and Farquhar sts.	"	"	139
Merlin st.	Centre and Weld sts.	"	"	145
Selwyn st.	Arundel and Mozart sts.	"	"	109
Montebello road	From Walnut ave.	"	"	270
Beech st.	At Belgrade ave.	"	"	66
Atherton st.	Amory and Lamartine sts.	"	"	715
Lassell st.	Dent and Perham sts.	"	"	225
Maple st.	From Weld st.	"	"	221
Baker st.	Ballinakill ave. and Johnson st.	"	"	338
Oakland st.	Washington and Faneuil sts.	Bri.	"	592
Faneuil st.	Oakland and Hobart sts.	"	"	671
Nonantum st.	At Newton line.	"	"	108
Blackington st.	Walley and Leyden sts.	E. B.	"	96
Frankfort st.	Off Maverick st.	"	"	200
	Total 12-inch.			<u>27,864</u>
Devonshire st.	Franklin and Milk sts.	C. P.	10-in.	92
Congress st.	From Atlantic ave. (east)	"	"	380
Greenbrier st.	Bloomfield and Park sts.	Dor.	"	786
Tonawanda st.	From Greenbrier st.	"	"	6
	<i>Carried forward</i>			<u>1,264</u>

Statement of Location, Size, etc. — *Continued.*

In what Street.	Between what Streets.	District.	Size.	Length.
	<i>Brought forward</i>.....	.....	.....	1,264
Tonawanda st.....	Geneva ave. and Greenbrier st.....	Dor.	10-in.	1,755
Milton st.....	From Granite ave.	"	"	260
Capen st.....	Evans and Maxwell sts.	"	"	263
Harrishof st.....	From Walnut ave.....	Rox.	"	394
Colberg ave.....	At Arden st.....	W. Rox.	"	74
" "	" " "	"	"	36
	Total 10-inch.....	.....	.....	4,046
Hanover st.....	At Court st.....	C. P.	8-in.	98
Columbus ave.....	Berkeley st. and B. & A. R.R. bridge,	"	"	132
Hanover st.....	Elm and Washington sts.....	"	"	208
Washington st.....	Hanover and Brattle sts.....	"	"	477
Hanover st.....	At Court st.	"	"	6
McLellan ave.	Blue Hill ave. and Erie st.	Dor.	"	212
Faxon st.	Clinton and Trescott st.....	"	"	35
Charles st.	Geneva ave. and Ditson st.	"	"	479
Ormond st.....	Ponemah and Duke sts.....	"	"	678
Waldeck st.....	From Geneva ave.....	"	"	311
Fenton st.....	" Duncan st.....	"	"	93
McLellan ave.....	At Blue Hill ave.....	"	"	23
Charlotte st.....	" " " "	"	"	8
Pontine st.....	Clifton and Batchelder sts.	"	"	200
Fairmount ave.....	Ogden and Nevada sts.	"	"	536
Randolph road.....	Richmond and Rockingham roads....	"	"	527
Rockingham road....	Randolph road and Oakland st.....	"	"	722
Denney st.....	From Savin Hill ave.....	"	"	451
Adams st.....	Rosemont and King sts.	"	"	3
Kerwin st.	Bernard st. and Talbot ave.....	"	"	300
Thatcher road	From Stoughton st.	"	"	10
Phipps ave.....	" Blue Hill ave.....	"	"	502
Astoria st.	" Elizabeth st.	"	"	39
Homes ave.....	Bowdoin st. and Geneva ave.....	"	"	360
Waldeck st.....	Tremlett pk. and Park st.....	"	"	125
McLellan ave.....	Bradshaw st. and Paige ave.	"	"	82
	<i>Carried forward</i>.....	.....	.....	6,617

Statement of Location, Size, etc. — *Continued.*

In what Street.	Between what Streets.	District.	Size.	Length.
	<i>Brought forward</i>			6,617
Spencer st.....	At W. Park st.	Dor.	8-in.	3
Greenwood st.	" May st.....	"	"	146
Private way	From Fremont st.....	"	"	453
Wellesley pk.....	Melville ave. and Park st.	"	"	863
Rosseter st.	From Bowdoin ave.....	"	"	182
Melville ave.....	Upland st. and railroad.....	"	"	156
Wellesley pk.	At Melville ave.....	"	"	12
Egmont st.....	From E st.....	So. B.	"	3
Fargo st.	" " "	"	"	6
Wormwood st.....	At New England Railroad.....	"	"	59
Hilton st.....	From Swett st.	Rox.	"	271
Sherwood st.	" Norfolk ave.....	"	"	54
Bragdon st.	At Columbus ave.....	"	"	31
Bynner st.	Catalpa and Day sts.....	"	"	300
Ruggles st.....	Parker st. and Huntington ave.....	"	"	542
Norway st.....	Massachusetts ave. and Parker st....	"	"	768
Turner st.....	Haviland and Astor sts.	"	"	442
Arcola st.	From Day st.....	"	"	270
Dunreath st.	Aspen and Warren sts.	"	"	411
Day st.....	At Heath st.....	"	"	150
Cranford st.	Heath and Floyd sts.....	"	"	178
Willow st.	Dunbar and Weld sts.....	W. Rox.	"	205
Patten st.....	Hyde Park ave. and Rodman st.....	"	"	874
Wachusett st.....	Patten and Rodman sts.	"	"	315
Hemlock st.....	Washington and Bellevue sts.....	"	"	84
Clement ave.....	Stratford ave. and Park st.....	"	"	147
Aldworth st.....	From Centre st.	"	"	827
Hautvale st.....	" Clarendon ave.....	"	"	57
Clarendon ave.....	Beech and Hautvale sts.....	"	"	316
Wiedman st.....	From Canterbury st.....	"	"	245
Winslow st.....	Perham and Temple sts.....	"	"	153
Fletcher st.....	Montclair ave. and Centre st.....	"	"	320
Montclair ave.....	From Fletcher st.	"	"	81
Farquhar st.....	Centre and South sts.....	"	"	85
	<i>Carried forward</i>			15,626

Statement of Location, Size, etc. — *Continued.*

In what Street.	Between what Streets.	District.	Size.	Length.
	<i>Brought forward</i>			15,626
Tower st.....	From Hyde Park ave.....	W. Rox.	8-in.	658
Kittredge st.....	At Cornell st.....	"	"	39
Cornell st.....	" Kittredge st.....	"	"	134
Mapleton st.....	Murdock and Market sts.....	Bri.	"	1,005
Ayr road.....	Beacon st. and Orkney road.....	"	"	254
Orkney road.....	From Ayr road.....	"	"	326
Allston Heights.....	" Ridgemont st.....	"	"	290
Ridgemont st.....	At Allston Heights.....	"	"	12
Union st.....	" Shannon st.....	"	"	80
Green st.....	High and Main sts.....	Chn.	"	79
	Total 8-inch.....			18,503
Lovering pl.....	At Washington st.....	C. P.	6-in.	17
Water st.....	Devonshire and Congress sts.....	"	"	108
Devonshire st.....	At State st.....	"	"	38
Otis st.....	From Summer st.....	"	"	188
Grenville pl.....	At Columbus ave.....	"	"	142
Sears st.....	Central wharf and India st.....	"	"	345
Devonshire st.....	State and Water sts.....	"	"	291
Portland st.....	Travers and Merrimac sts.....	"	"	60
Hathaway pl.....	Off Congress st.....	"	"	85
Washington st.....	At W. Canton st.....	"	"	12
Blackwell st.....	From St. Botolph st.....	"	"	270
Barton st.....	At Milton st.....	"	"	90
Lewis st.....	Moon and North sts.....	"	"	144
Noyes pl.....	From Salem st.....	"	"	180
Mascot ave.....	" Ballou ave.....	Dor.	"	230
Elmo st.....	" Erie ave.....	"	"	380
Banfield st.....	" Woodlawn ave.....	"	"	3
Coflin st.....	" Savin Hill ave.....	"	"	325
Oakwood ave.....	" Capen st.....	"	"	188
Pleasant st.....	" Savin Hill ave.....	"	"	35
Salcombe st.....	" Stoughton st.....	"	"	188
Trescott st.....	" Bakersfield st.....	"	"	12
	<i>Carried forward</i>			3,321

Statement of Location, Size, etc. — *Continued.*

In what Street.	Between what Street.	District.	Size.	Length.
	<i>Brought forward</i>			3,321
Hinckley st.....	From Bakersfield st.....	Dor.	6-in	10
Percival ave.....	“ Bowdoin st.	“	“	243
Corona st.....	“ Geneva ave.	“	“	3
Oakley st.....	“ “ “	“	“	15
Holiday st.....	West of “ “	“	“	3
“ “	East of “ “	“	“	40
Burt ave.....	From Washington st.	“	“	9
Gawain st.	Harvard and Park sts.	“	“	743
Browning ave.....	From Bernard st.	“	“	43
Helen st.....	“ “ “	“	“	44
Drayton ave.....	“ Quincy “	“	“	192
Flint st.	“ Norfolk “	“	“	137
Peverall st.....	“ Salcombe st.....	“	“	152
Newhall ave.....	Adams and Newhall st.	“	“	421
Monson st.....	From Sturbridge st.....	“	“	103
May “	Glenway and Greenwood sts.....	“	“	39
Mascot ave.	From Ballou ave.	“	“	24
Wellesley pk.....	Meville ave. and Park st.....	“	“	527
Norton st.	From Stonehurst st.	“	“	35
Bellevue st.....	Columbia and Trull sts.....	“	“	100
Burt ave.....	Washington and Ashmont sts.....	“	“	197
Hartland st.....	Sydney st. and Tuttle ave.....	“	“	108
Malvern st.....	Adams and Milton sts.....	“	“	204
Trescott “	From Faxon st.	“	“	263
Soudan “	“ Sydney “	“	“	20
Mallett “	Adams st. and Shaw pk.	“	“	311
Dorchester way.....	Dorchester ave. and Pond st.	“	“	836
Pond st.....	From Dorchester way.....	“	“	414
Proposed st.	“ Pond st.	“	“	4
Castle Rock st.....	“ Gramplan way	“	“	6
Dakota st.....	Geneva ave. and Greenbrier st.	“	“	102
Vinson “	At Geneva ave.	“	“	18
Gibson “	From Dorchester ave.....	“	“	46
Ditson “	Charles and Josephine sts.....	“	“	263
	<i>Carried forward</i>			8,996

Statement of Location, Size, etc. — *Continued.*

In what Street.	Between what Streets.	District.	Size.	Length.
	<i>Brought forward</i> .....	.....	.....	8,996
Ditson st.	Leroy and Westville sts.	Dor.	6-in.	62
Duke st.	Ponemah and Ormond st.	"	"	627
Lindsay st.	From Greenbrier sts.	"	"	23
Stratford st.	" " "	"	"	30
Samoset st.	Welles ave. and Centre st.	"	"	393
Rosemont st.	Samoset st. and Dorchester ave.	"	"	550
May st.	From Glenway st.	"	"	48
Blue Hill ave.	Walk Hill and Ponemah sts.	"	"	704
Tileston st.	From Blue Hill ave.	"	"	16
Chamberlain st.	Cook and Algonquin sts.	"	"	192
Ellet st.	Adams st. and Dorchester ave.	"	"	129
East st.	Highland ave. and Dorchester ave.	"	"	80
Brunswick st.	From Blue Hill ave.	"	"	24
Dracut st.	Dorchester ave. and Bruce st.	"	"	100
Hunter st.	From Morton st.	"	"	100
Southern st.	" Washington st.	"	"	141
Hopestill st.	" Southern ave.	"	"	30
Athelwold st.	At Culvert.	"	"	27
Mattapan st.	From Tileston ave.	"	"	42
Moultrie ave.	Allston and Seaborn sts.	"	"	627
Nevada st.	At Fairmount ave.	"	"	6
Roach st.	From Dorchester ave.	"	"	51
Edson green	Dorchester ave. and Pond st.	"	"	1,385
Devon st.	From Blue Hill ave.	"	"	60
White terrace.	Lauriat ave. and Jones ave.	"	"	264
Roland road.	Randolph road and Oakland st.	"	"	359
Selden st.	Morton and Capen sts.	"	"	160
May st.	From Glenway st.	"	"	60
Harrison st.	Greenhill and Preston sts.	"	"	206
Coleman st.	At Quincy st.	"	"	32
Oakwood ave.	From Capen st.	"	"	19
Dudley st.	Monadnock and Virginia sts.	"	"	250
Virginia st.	From Dudley st.	"	"	115
Morton st.	West of Bowdoin st.	"	"	54
Rupert st.	From Kilton st.	"	"	6
	<i>Carried forward</i> .....	.....	.....	15,968

Statement of Location, Size, etc. — *Continued.*

In what Street.	Between what Streets.	District.	Size.	Length.
	<i>Brought forward</i>			15,968
Oak ave.	Adams and Plain sts.	Dor.	6-in.	83
" "	" " "	"	"	125
Pierce ave.	" " "	"	"	74
Barry st.	South of Barrington st.	"	"	172
" "	North of Barrington st.	"	"	24
Adams st.	Rosemont and King sts.	"	"	154
Dudley st.	Virginia st. and Upham's Corner....	"	"	374
Bellevue st.	East of Quincy st.	"	"	40
" "	West of Quincy st.	"	"	21
Sawyer ave.	At Cushing ave.	"	"	381
Bellevue st.	From Barrington st.	"	"	110
Woodlawn ave.	From Savin Hill ave.	"	"	4
Granville st.	From Milton st.	"	"	15
Cunningham st.	From Hartford st.	"	"	19
Gold st.	C and D sts.	So. B.	"	3
Champney st.	From Mercer st.	"	"	538
Broadway	E and F sts.	"	"	556
Sixth st.	At F st.	"	"	6
Roswell st.	Shirley and Langdon sts.	Rox.	"	280
Glenbrook st.	Dewey and Dalmatia sts.	"	"	49
Rockledge st.	Lambert ave. and Thornton st.	"	"	21
Columbus ave.	West Walnut pk. and Dimock st.	"	"	824
Bragdon st.	At Columbus ave.	"	"	30
Colony pl.	Off Fellows st.	"	"	111
Hamerton st.	From Humboldt ave.	"	"	144
Linden Park st.	From Gay st.	"	"	10
Cherokee st.	From Hillside st.	"	"	79
Gay st.	At Linden Park st.	"	"	69
Ruggles st.	Huntington ave. and Fens.	"	"	444
Wensley st.	From Heath st.	"	"	72
Daniel st.	Mall and Webber sts.	"	"	265
Carmel st.	From Tremont st.	"	"	233
Zamora st.	Perkins and Castleton sts.	"	"	613
Heath st.	Cranford and So. Huntington ave. ...	"	"	96
	<i>Carried forward</i>			21,966

Statement of Location, Size, etc. — *Continued.*

In what Street.	Between what Streets.	District.	Size.	Length.
	<i>Brought forward</i>			21,956
Floyd st.	Cranford and So. Huntington ave....	Rox.	6-in.	290
Albany st.	Mall and Dearborn sts.	"	"	149
Whipple st.	Astor and Haviland sts.	"	"	50
Binney st.	From Longwood ave.	"	"	84
Delle ave.	At Burney st.	"	"	59
Burney st.	At Delle ave.	"	"	24
Haley st.	Harrishof and Dennison sts.	"	"	335
Whiting st.	At Moreland st.	"	"	60
Dennison st.	Haley and Harrishof sts.	"	"	418
Burney st.	Tremont st. and Delle ave.	"	"	120
Colony pl.	From Fellows st.	"	"	27
Wabeno st.	Wabon and Waumbeck sts.	"	"	44
Wabon st.	At Wabeno st.	"	"	33
Columbus ave.	Dimock st. and Stony brook.	"	"	1,114
Proposed street (from 6-inch main)	Off Columbus ave., north of Dimock st.,	"	"	22
Proposed street (from 12-inch main)	" " " " " "	"	"	26
Proposed street.	" " " 2d " " "	"	"	18
Lamartine st.	From Bell st.	W. Rox.	"	226
Spaulding st.	From South st.	"	"	346
Wren st.	Oriole and Rutledge sts.	"	"	212
Rockland st.	From Washington st.	"	"	72
Newsome pk.	" Eliot st.	"	"	277
Maxfield st.	Bellevue and La Grange sts.	"	"	201
Robinwood st.	From Locksley st.	"	"	87
Newburn st.	At Carolina ave.	"	"	73
Eldredge st.	From Metropolitan ave.	"	"	96
Arden st.	At Colberg ave.	"	"	27
Congreve st.	Centre and South sts.	"	"	192
Avalon road.	From Weld st.	"	"	372
Johnson st.	At Baker st.	"	"	200
Custer st.	" Arborway	"	"	38
Fresno st.	Off Dudley ave.	"	"	222
Robinwood ave.	At Enfield st.	"	"	70
	<i>Carried forward</i>			27,545

Statement of Location, Size etc. — *Concluded.*

In what Street.	Between what Streets.	District.	Size.	Length.
	<i>Brought forward</i>			27,545
Morton st..... ..	At Arborway	W. Rox.	6-in.	36
Chestnut sq..... ..	From Chestnut ave.....	"	"	140
Flora st..... ..	Near Clement ave.....	"	"	217
Sylvia st..... ..	Washington and Forest Hills sts.....	"	"	84
Fletcher st..... ..	Centre and South sts.....	"	"	168
Newbern st..... ..	At Carolina ave.....	"	"	111
Rodman st..... ..	Wachusett and Patten sts.....	"	"	594
Lorraine st..... ..	Colberg ave. and Belgrade st.....	"	"	360
Fresno st..... ..	Off Dudley ave.....	"	"	79
Irving st..... ..	From Pelton st.....	"	"	115
Adelaide st..... ..	Boylston st. and Spring Park ave...	"	"	120
" pl..... ..	From Adelaide st.....	"	"	15
Orange st..... ..	" Cornell st.....	"	"	96
Leicester st.	Surrey and Bennett sts.....	Bri.	"	145
Spring st.	Etna and George sts.....	"	"	36
Rena st.	Hubbard st. and Western ave.....	"	"	36
Shannon st..... ..	At Union st.....	"	"	142
Telford st.	Off Western ave.....	"	"	366
Linden st..... ..	At Brighton ave.....	"	"	65
Boyle st..... ..	Cordis and Pleasant sts.....	Chn.	"	173
Seminary st.	Lawrence and Austin sts.....	"	"	158
Beacham st..... ..	Main and West sts.....	"	"	277
Byron st..... ..	Off Saratoga st.	E. B.	"	60
Bellevue	Quincy, Mass.		"	204
	Total 6-inch			31,342
Salvisberg ave.	Off Hampshire st.....	Rox.	4-in.	72
Beacon st..... ..	At Chestnut Hill ave.	Bri.	"	264
Fisher ave..... ..	At Fisher Hill Reservoir.....	Brookline.	"	68
	Total 4-inch			404

**Statement of Private Mains Laid and Relaid during
the Year ending January 31, 1898.**

For whom Laid.	Where Laid.	Size.	Length.
Park Department.....	Arborway, between Washington and South sts.....	10-in.	359
" "	Arborway, between Hampstead road and Centre st.....	"	88
" "	M-st. Playground, South Boston	4-in.	216
" "	" " " "	6-in.	390
Fire Department (salt water main).....	Atlantic ave., Congress, Central sts. and Exchange pl.....	12-in.	3,870
Town of Brookline (re-laid).....	Fisher ave. between Boylston st. and Reservoir	16-in.	660
Town of Brookline (re-laid).....	Fisher ave., between Boylston st. and Reservoir	8-in.	18
	Total number of feet.....		<u>5,601</u>

Statement of Main Pipe Lowered.

In what Street.	Between what Streets.	District.	Size.	Length.
Blue Hill ave.....	Fessenden and Walk Hill sts.....	Dor.	16-in.	100
Bernard st.	Talbot ave. and Helen sts.....	"	12-in.	100
" "	South of Talbot ave.	"	"	100
Walk Hill st.....	Under Railroad Bridge.....	W. R.	"	77
	Total 12-inch.....			<u>277</u>
Elizabeth st.	Norfolk and Astoria sts.....	Dor.	8-in.	200
Talbot ave.....	Bernard and Westcott sts.....	"	6-in.	68
Tremont st.	Under Railroad Bridge.....	Rox.	"	26
Adelaide st.....	Boylston st. and Spring Park ave. ...	W. R.	"	277
	Total 6-inch			<u>371</u>

Statement of Main Pipe Abandoned.

In what Street.	Between what Streets.	District.	Size.	Length.
Tremont st.	Opp. Common st.	C. P.	30-in.	11
D st.	Danby and Congress sts.	So. B.	"	914
Fisher ave.	Boylston st. and Reservoir	Brookline.	"	24
	Total 30-inch			949
Essex st.	At Washington st.	C. P.	24-in.	5
Congress st.	B and D sts.	So. B.	"	550
	Total 24-inch			555
Dover st.	At Washington st.	C. P.	20-in.	12
Thomas pk.	" Reservoir.	So. B.	"	366
	Total 20-inch			378
Columbus ave.	At Elmwood st. pumping station.	Rox.	16-in.	125
Centre st.	" Hogg's bridge.	"	"	210
" "	" " "	"	"	160
Blue Hill ave.	Walk Hill and Fessenden sts.	Dor.	"	8
	Total 16-inch.			503
Adams sq.	Devonshire st. and Cornhill.	C. P.	12-in.	125
Tremont st.	At School st.	"	"	21
" "	School st. and Scollay sq.	"	"	415
" "	Opp. Common st.	"	"	12
Washington st.	Kneeland and Dover sts.	"	"	1,457
State st.	Washington and Commercial sts.	"	"	1,174
India st.	At State st.	"	"	22
Commercial st.	" " "	"	"	15
Hanover st.	" Court st.	"	"	49
Harrison ave.	" Asylum st.	"	"	6
" "	" Lovering pl.	"	"	5
Atlantic ave.	" Congress st.	"	"	18
Beach st.	Cove and Federal sts.	C. P.	12-in.	155
Federal st.	Kneeland and Essex sts.	"	"	793
" "	" " " "	"	"	900
Cornhill	Adams sq. and Court st.	"	"	475
	Carried forward			5,642

Statement of Main Pipe Abandoned. — *Continued.*

In what Street.	Between what Streets.	District.	Size.	Length.
	<i>Brought forward.....</i>			5,642
Court st.....	At Cornhill	C. P.	12-in.	80
Tremont st.....	" "	"	"	185
Charlesgate West....	" Boston & Albany bridge.....	"	"	115
Walk Hill st.....	" Blue Hill ave.....	Dor.	"	30
Blue Hill ave.....	" Charlotte st.....	"	"	125
" " "	Glenway st. and McLellan ave.....	"	"	30
Walk Hill st.....	At Northwest corner of Blue Hill ave..	"	"	20
Dorchester ave.....	" Edson Green	"	"	7
Adams st.....	" Tenean brook.....	"	"	72
Geneva ave.....	West of Columbia st.	"	"	21
Columbia road	Washington st. and Geneva ave.....	"	"	24
Clifton st.	At Dudley st.	"	"	6
Morton st.....	West of Norfolk st.	"	"	17
Ashmont st.....	Near Washington st.....	"	"	16
Egmont st.....	C and E sts.....	So. B.	"	80
Thomas pk.....	At Reservoir.....	"	"	264
Centre st.....	" Hogg's bridge.....	Rox.	"	210
" "	" " "	"	"	220
Amory st.....	" " "	"	"	80
Across vacant land and under railroad,	Lamartine and Amory sts.....	"	"	545
West Walnut pk.	Washington st. and Columbus ave....	"	"	11
Blue Hill ave.	Georgia st. and Geneva ave.	"	"	12
Florence st.....	Brooks and Ashland sts.	W. Rox.	"	20
Chelsea st.....	Junction of Joiner st.	Chn.	"	12
Border st.	Intersection of Maverick st.....	E. B.	"	20
Meridian st.....	Junction of Maverick st.	"	"	7
Sumner st.....	Intersection of Orleans st.	"	"	4
Marginal st.....	" " " "	"	"	9
Fisher ave.....	At Reservoir.....	Brookline	"	43
	Total 12-inch.			7,927
Essex st.	At Federal and Cove st..	C. P.	10-in.	25
Blue Hill ave.	Esmond and Glenway sts.....	Dor.	"	755
Ward st. (J. P. A.)...	At Reims pl.....	Rox.	"	20
	Total 10-inch.			800

Statement of Main Pipe Abandoned. — Continued.

In what Street.	Between what Streets.	District.	Size.	Length.
Boston Common	Opposite Mason st.	C. P.	8-in.	6
Washington st.....	Elm st. and Dock sq.	"	"	151
Dover st.	At Washington st.	"	"	36
Boylston st.	" " "	"	"	10
Pemberton sq.....	At Tremont st.....	"	"	35
Tremont st.	Boylston and Warrenton sts.....	"	"	925
Quincy st.....	At Bellevue st.....	Dor.	"	8
Bernard st.....	" Kerwin st.	"	"	8
Heath st.	Lawn and Cranford sts.....	Rox.	"	96
Hull st.	Chelsea and Vine sts.....	Chn.	"	3
Pine st.....	Off Vine st.	"	"	3
Liverpool st.	Intersection of Maverick st.....	E. B.	"	6
	Total 8-inch.			1,287
Tremont st.....	School st. and Scollay sq.....	C. P.	6-in.	300
Washington st.....	Kneeland and Dover sts.	"	"	1,135
Compton st. ...	At Washington st.	"	"	34
Compton st.	Tremont and Washington sts.....	"	"	1,127
Washington st.....	At State st.....	"	"	12
Congress st.	Atlantic ave. and High st.....	"	"	390
Washington st.....	Waltham and Union Park sts.....	"	"	289
Avery st.	Mason and Washington sts.	"	"	410
Cove st.	Kneeland and Essex sts.	"	"	640
East st.	Cove and Federal sts.	"	"	80
Howard st.....	Stoddard and Somerset sts.....	"	"	144
Seaver pl.	From Tremont st.....	"	"	3
Shaving st.	Federal st. and Mt. Washington ave..	"	"	460
Ashton pl.....	From Charles st.....	"	"	19
Boylston st.	Park sq. and Tremont st.....	"	"	775
Sydney st... ..	Romsey st. and Crescent ave.....	Dor.	"	381
Blue Hill ave.	At Glenway.....	"	"	36
Virginia st.....	" Davenport ave... ..	"	"	4
Clapp st.....	From Massachusetts ave.....	"	"	360
Savin Hill ave.	Endleigh st. and railroad.....	"	"	802
Wesley ave.	From Savin Hill ave.	"	"	50
Savin Hill ave.....	" Gramplan Way.....	"	"	550
	Carried forward.			8,001

Statement of Main Pipe Abandoned. — *Continued.*

In what Street.	Between what Streets.	District.	Size.	Length.
	<i>Brought forward</i>			8,001
Savin Hill ave.	At Grampian Way.....	Dor.	6-in.	26
Grampian way	Savin Hill ave. and Evandale terrace,	"	"	679
Everett ave.	From Stoughton st.	"	"	25
McLellan ave.	Blue Hill ave. and Erie st.	"	"	168
Barry st.	From Barrington st.	"	"	23
Geneva ave.	Washington and Wilder sts.	"	"	125
E st.	North of Sixth st.	So. B.	"	4
Bowen st.	At E st.	"	"	16
Broadway	" B st.	"	"	8
Mercer st.	" Vale st.	"	"	14
G st.	" James st.	"	"	2
W. Walnut park.....	Washington st. and Columbus ave....	Rox.	"	198
Marcella st.	Washington and Highland sts.	"	"	1,353
Bromley st.	At Old Heath st.	"	"	8
Willow park	Off Shawmut ave.	"	"	118
Sycamore st.	At Ridge st.	W. Rox.	"	10
Custer st.	At Arborway	"	"	3
Commonwealth ave...	Harvard ave. and Allston st.	Brl.	"	270
Oakland st.	Washington and Faneuil sts.	"	"	744
Joiner st.	Chelsea and Park sts.	Chn.	"	209
Maverick st.	New and Chelsea sts.	E. B.	"	1,354
London st.	Intersection of Maverick st.	"	"	11
Havre st.	" " " "	"	"	12
Paris st.	" " " "	"	"	16
Marginal st.	Cottage and Ruth sts.	"	"	786
Orleans st.	Marginal and Sumner sts.	"	"	613
Sumner st.	New and Border st.	"	"	30
	Total 6-inch			<u>14,826</u>
Haymarket pl.	Off Avery st.	C. P.	4-in.	249
Tremont row.	At Howard st.	"	"	72
Stoddard st.	Court and Howard sts.	"	"	166
Carlton st.	At Berwick pk.	"	"	50
Berwick pk.	At Carlton st.	"	"	27
Van Rensselaer pl. .	From Tremont st.	"	"	22
	<i>Carried forward</i>			586

Statement of Main Pipe Abandoned.— *Continued.*

In what Street.	Between what Streets.	District.	Size.	Length.
	<i>Brought forward</i>			586
Ashton pl.....	From Charles st.....	C. P.	4-in.	158
Garland st.....	At Washington st.	"	"	24
Lucas st.	" " " "	"	"	27
Cherry st.	" " " "	"	"	27
Davis st.	" " " "	"	"	14
Asylum st.	" " " "	"	"	6
Bumstead court...	At Boylston st.	"	"	7
Trumbull st.....	At Newland st.....	"	"	8
Lovering pl.....	Washington st. and Harrison ave.	"	"	340
Asylum st.	" " " " " "	"	"	346
Boylston pl.....	From Boylston st.	"	"	20
Ashton pl.....	" Charles st.	"	"	29
Webster ave.....	At Unity st.....	"	"	12
Unity court.....	" " "	"	"	12
Wiget st.	Salem and Marginal sts.....	"	"	250
Gray st.	Berkeley and Clarendon sts.	"	"	630
Pelham st....	Washington st. and Shawmut ave.....	"	"	449
Pelham-Street pl....	From Pelham st.....	"	"	22
Carlton st.....	At W. Newton st.....	"	"	24
Exeter pl.	Harrison ave. and Chauncy st.....	"	"	180
Paul st.	Tremont and Emerald sts.	"	"	480
Alden st.	Court and Sudbury sts.....	"	"	240
Tamworth st.....	At La Grange st.....	"	"	15
Avery pl.....	From Avery st.	"	"	15
Lawrence st.	Berkeley and Dartmouth sts.....	"	"	1,260
Hilton st.....	From Swett st.....	Rox.	"	300
Holden pl.....	" Dudley st.	Dor.	"	26
Fenton pl.....	" Greenwich st., north side	"	"	27
" "	" " " south "	"	"	4
Clifton st.....	At Dudley st.....	"	"	36
Gold st.....	" E st.....	So. B.	"	50
" "	" F st.....	"	"	50
" "	D and E sts	"	"	553
" "	E and F "	"	"	500
	<i>Carried forward</i>			6,727

Statement of Main Pipe Abandoned. — *Continued.*

In what Street.	Between what Streets.	District.	Size.	Length.
	<i>Brought forward.....</i>			6,727
Gold st.	F and Dorchester sts.....	So. B.	4-in.	541
Beckler ave.....	From K st.....	"	"	254
Gates st.....	Dorchester and Telegraph sts.....	"	"	440
" "	Telegraph and Eighth sts.....	"	"	616
Silver st.....	Dorchester and G sts.....	"	"	658
Gold st.....	B st. and railroad.....	"	"	151
Dacia pl.....	From Dacia st.....	Rox.	"	34
" terrace	" " "	"	"	36
Adams pl.....	" Williams st.....	"	"	18
Kensington pk.....	" Warren st.....	"	"	52
Rheims pl. (J.P.A.)..	" Ward st.....	"	"	200
Downing st.....	" Vernon st.....	"	"	170
Centre-street pl.....	" Centre st.....	"	"	140
Walnut pk.....	Washington st. and Walnut ave.....	"	"	1,204
Concord ave.....	Concord and Jefferson sts.....	Chn.	"	24
Sullivan st.....	Russell and Bunker Hill sts.....	"	"	217
" "	Off Main st.....	"	"	48
Stacey st.....	" " "	"	"	36
Ellwood st.....	" " "	"	"	24
Tufts ct.....	" Tufts st.....	"	"	36
" "	" Corey st.....	"	"	24
Ludlow st.....	" Mead st.....	"	"	30
Hull st.....	Chelsea and Vine sts.....	"	"	209
Pine st.....	Off Vine st.....	"	"	36
Auburn ave.....	" Auburn st.....	"	"	25
Wall st.....	" Sullivan st.....	"	"	29
Mason ct.....	" " "	"	"	20
Wesley st.....	" " "	"	"	20
Linwood pl.....	" Main st.....	"	"	54
Murray ct.....	" Orleans st.....	E. B.	"	40
Boston Dye Wood Co. Wharf.....	" Border st.....	"	"	20
Dry Dock Co. Wharf,	" " "	"	"	20
Haynes st.....	" Orleans st.....	"	"	35
	Total 4-inch			<u>12,188</u>

Statement of Main Pipe Abandoned. — *Concluded.*

In what Street.	Between what Streets.	District.	Size.	Length.
Willow Park	Off Shawmut ave.....	Rox.	3-in.	50
Bispham st.	From Park st.....	Dor.	"	174
Hudson st.	Off Chelsea st.....	Chn.	"	20
Green st.	High and Main sts.....	"	"	190
Avon pl.	Off Sullivan st.....	"	"	22
Exeter pl.	" " "	"	"	24
	Total 3-inch			480

Gates Established and Abandoned during the Year and Number in use January 31, 1898, exclusive of Blow-off, Private, and those gates taken by Metropolitan Water Board January 1, 1898.

DIAMETER IN INCHES.															Totals.
48	40	36	30	24	20	16	12	10	8	6	4	3			
Total number in use Jan 31, 1897															7,684
Established during the year.....															509
Abandoned during the year.....															176
Number taken by Met. Water Board....															86
Total number in use, Jan. 31, 1898....															7,931

Blow-off Gates Established and Abandoned During the Year.

	DIAMETER IN INCHES.			Total.
	4-in.	6-in.	12-in.	
Number established.....	6	3	2	11
Number abandoned.....	1	1	.....	2
Increase.....	5	2	2	9

Private Gates Established and Abandoned During the Year.

	DIAMETER IN INCHES.					Total.
	6-in.	8-in.	10-in.	12-in.	16-in.	
Number established.....	1	3	1	1	1	7
Number abandoned.....	.....	.....	.....	1	.....	1
Increase.....	1	3	1		1	6

Hydrants Established and Abandoned During the Year.

	ESTABLISHED.				Totals.	ABANDONED.				Totals.	Increase.	Decrease.
	Lowry.	B. Lowry.	Post.	Boston.		Lowry.	B. Lowry.	Post.	Boston.			
City Proper (Public).....	53	1	8	....	62	33	3	2	24	62		
" (Private).....				....					1	1	.....	1
South Boston (Public)	9	3	15	1	28	....	1	....	18	19	9	
" (Private).....			4	....	4	....			1	1	3	
East Boston (Public).....	10	....	15	....	25	7	....	....	13	20	5	
Roxbury (Public).....	8	11	34	....	53	9	6	2	3	20	33	
Dorchester (Public).....	3	36	113	....	152	19	28	15	2	64	88	
" (Private).			1	....	1	....					1	
West Roxbury (Public)...		36	11	1	48	....	13	5	2	20	28	
Brighton (Public).....		5	17	1	23	3	2	1	4	10	13	
Charlestown (Public).....		1	3	....	4	....					4	
Medford									1	1	.....	1
Total Public	83	93	216	3	395	71	53	25	67	216	180	1
Total Private			5	....	5	....			2	2	4	1

Total Number of Hydrants in use January 31, 1898.

	Lowry.	Post.	B. Lowry.	Boston Y.	Boston.	Totals.	NOTES.
City Proper (Public)....	747	307	56	....	366	1,476	
“ “ (Private).....	.....	10	.....	....	45*	55	*27 not for fire.
South Boston (Public)...	228	126	25	....	185	564	
“ “ (Private)..	2	13*	.....	1	32*	48	*2 Bostons } not for fire. *4 Posts }
East Boston (Public)....	147	134	25	....	78	384	
“ “ (Private)...	8	7	.....	....	25*	40	*7 not for fire.
Roxbury (Public).....	641	357	87	....	64	1,149	
“ (Private).....	1*	.....	.....	....	10*	11	*1 Lowry } not for fire. *1 Boston }
Dorchester (Public)....	564	767	247	....	50	1,628	
“ (Private)....	.....	1*	1	....	5*	7	*2 Bostons } not for fire. *1 Post }
West Roxbury (Public)..	129	561	221	....	40	951	
“ “ (Private). ....	.....	13	.....	....	1	14	
Brighton (Public).....	75	326	73	....	27	501	
“ (Private).....	.....	6	.....	....	2*	8	*2 not for fire.
Charlestown (Public) ...	205	41	37	....	4	287	
“ (Private)...	14	36	1	....	6*	57	*1 not for fire.
Deer Island (Private)...	.....	18	.....	....	.....	18	
Long Island (Private)...	.....	6	.....	....	.....	6	
Thompson's Island (Private) .....	.....	2	.....	....	.....	2	
Rainsford's Island (Private) .....	.....	1	3	....	1*	5	*1 not for fire.
Galloupe's Island (Private) .....	.....	1	.....	....	1*	2	*1 not for fire.
Brookline.....	5	.....	.....	....	3	8	
Chelsea .....	.....	.....	.....	....	7	7	
Quincy .....	.....	7	.....	....	.....	7	
Total number Public Hydrants	2,736	2,619	771	....	814	6,940	
Total number Private and Suburban Hydrants....	30	121	5	1	138	295	

NOTE.—This list does not include the following hydrants taken January 1, 1898, by the Metropolitan Water Board.—

Brighton (Public)	3 Posts
Pumping Station, West Somerville (Private)....	{ 1 Boston 2 Posts
Medford	{ 5 Bostons 2 Posts

Water Posts.

DISTRICT.	Number in use Jan. 31, 1897.	Established during the Year.	Abandoned during the Year.	Number in use Jan. 31, 1898.
City Proper.....	54	1	.....	55
South Boston.....	28	.....	.....	28
East Boston.....	32	.....	.....	32
Roxbury.....	69	.....	.....	69
Dorchester.....	80	3	.....	83
West Roxbury.....	75	1	.....	76
Brighton.....	47	.....	2	45
Charlestown.....	20	.....	.....	20
	405	5	2	408

Repairs of Pipes during the Year ending Jan. 31, 1898.

	DIAMETER OF PIPES IN INCHES.																	Totals.	
	48	36	30	24	20	16	12	10	8	6	4	3	2	1½	1¼	1	¾		
City Proper.....	1	2	17	3	6	35	190	3	58	81	30	6	6	1	2	16	17	787	1,261
South Boston	..	..	2	..	3	..	14	..	1	13	8	..	..	..	..	..	..	243	284
East Boston.....	..	..	..	1	8	..	11	1	1	5	1	..	..	..	..	1	..	109	138
Roxbury.....	..	2	1	3	10	1	14	2	1	25	5	..	..	..	..	4	3	384	455
Dorchester.....	..	..	..	..	..	2	8	3	6	31	4	..	..	..	..	..	..	237	291
West Roxbury.....	..	1	1	..	1	1	20	..	3	12	..	..	..	..	..	1	..	124	164
Brighton.....	..	..	..	1	1	..	3	..	5	4	..	..	..	..	..	1	..	40	55
Charlestown	..	..	1	3	1	8	4	..	2	5	1	..	2	..	..	..	..	101	128
Brookline.....	1	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4
Newton, L. F.....	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Totals	2	5	26	11	30	47	264	9	77	176	49	6	8	1	2	23	20	2,025	2,781

Causes of repairs that have been made on pipes of 4-inch diameter and upwards :

Blasting	28
Defective joints	136
" stop-cocks	122
" pipes	9
" packing	103
In way of various corporations	26
Joints strained by settling in subway	218
On account of Sewer Division	17
Settling of earth	31
Struck by pick	6

696

On 3 inch and on service pipes :

Broken in wall	19
" " sewer	81
" by builders of subway	51
" " team	4
" " steam-roller	11
" " blasting	14
" " pick	200
" " settling of earth	244
Defective pipe	162
" joints	37
" stop-cocks	47
" packing	10
" coupling	56
" valve	1
Eaten by soil	4
" " electricity	1
Frozen	55
Gnawed by rats	7
In way of various corporations	86
Relaying main pipe	250
Stopped by rust	490
" " dirt	135
" " fish	111
" " gasket	8
Broken by pile-driver	1

2,085

2,781

**Statement of Miscellaneous Work Performed during
the Year.**

Locations of gates marked and remarked	10,268
Dead ends blown off	190
Hydrant barrels changed for repairs	229
“ boxes repaired in service	635
“ “ renewed “ “	110
“ changed on account of no guides	136
“ repaired in service	1,646
“ boxes cleaned out	4,224
Boxes over bridges repaired	36
Main cocks renewed	49
Sidewalk cocks renewed	154
“ uprights raised or lowered	426
“ “ moved on account of edgestones	65
New main uprights put on	12
Stop-cock or gate-boxes repaired in service	1,004
“ “ “ “ renewed “ “	272
Water-posts repaired	665
Fire reservoirs repaired	9
Streets repaired	1,257
Gates salted on account of cold weather	9,362
Hydrants hayed “ “ “ “	808
Meters “ “ “ “ “	833
Number of examinations caused by false reports	953

Statement of Leaks and Stoppages, from 1850 to 1897.

YEAR.	DIAMETER IN INCHES.		TOTAL.
	Four inches and upwards.	Less than four inches.	
1850	32	72	104
1851	64	173	237
1852	82	241	323
1853	85	260	345
1854	74	280	354
1855	75	219	294
1856	75	232	307
1857	85	278	363
1858	77	234	311
1859	82	449	531
1860	134	458	592
1861	109	399	508
1862	117	373	490
1863	97	397	494
1864	95	394	489
1865	111	496	607
1866	139	536	675
1867	122	487	609
1868	82	449	531
1869	82	407	489
1870	157	707	864
1871	185	1,380	1,565
1872	188	1,459	1,647
1873	153	1,076	1,229
1874	434	2,160	2,594
1875	203	723	928
1876	214	734	948
1877	109	801	910
1878	213	1,024	1,237
1879	211	995	1,206
1880	135	929	1,064
1881	145	883	1,028
1882	170	1,248	1,418
1883	171	782	953
1884	253	1,127	1,380
1885	111	638	749

Statement of Leaks and Stoppages, etc. — *Concluded.*

YEAR.	DIAMETER IN INCHES.		TOTAL.
	Four inches and upwards.	Less than four inches.	
1886.....	150	725	875
1887.....	172	869	1,041
1888.....	216	1,140	1,356
1889.....	183	849	1,032
1890.....	180	718	898
1891.....	194	758	952
1892.....	212	1,232	1,444
1893.....	327	1,555	1,882
1894.....	349	1,354	1,703
1895.....	215	1,320	1,535
1896.....	820	1,976	2,796
1897.....	696	2,085	2,781

TABLES SHOWING DETAILS OF WORK PERFORMED IN SOMERVILLE, CHELSEA
AND EVERETT.

Length of Distributing Mains Laid and Relaid during the Year.

	DIAMETER IN INCHES.										Totals.
	1½-in.	1½-in.	2-in.	4-in.	6-in.	8-in.	10-in.	12-in.	16-in.	20-in.	
Somerville.....	.....	70	1,271	26	4,345	3,403	4,432	6,685	101	1,649	21,982
Chelsea.....	.....	.....	.....	.....	3,818	2,807	1,516	.....	.....	.....	8,141
Everett.....	150	.....	173	.....	7,344	.....	1,408	.....	.....	.....	9,075
Totals.....	150	70	1,444	26	15,507	6,210	7,356	6,685	101	1,649	39,198

Number of Gates Established during the Year.

DIAMETER IN INCHES.									
	2 in.	4 in.	6 in.	8 in.	10 in.	12 in.	20 in.	Various Sizes.	Totals.
Somerville								65	65
Chelsea			7	8	4				19
Everett.....	4	1	25		2	1	1		34
Totals	4	1	32	8	6	1	1	65	118

New Services.

	SIZE.							Total Feet.
	$\frac{1}{2}$ -in.	$\frac{5}{8}$ -in.	$\frac{3}{4}$ -in.	1-in.	$1\frac{1}{2}$ -in.	2-in.	Total.	
Somerville.....	.....	.....	546	11	3	2	562	16,027
Chelsea.....	12	58	4	.....	.....	.....	74	1,818
Everett.....	.....	224	1	1	.....	1	227	4,543
Totals.....	12	282	551	12	3	3	863	22,388

Distribution-Pipes Relaid.

LOCATIONS.	Original Size.	2-in.	4-in.	6-in.	8-in.	10-in.	12-in.	16-in.	20-in.
Somerville:									
Beacon pl.	4-in.			34					
Cameron ave.	6-in.					1,025			
“ “	4-in.			11					
Chauncey ave.	6-in.						171		
Clarendon ave.	8-in.				191				
Clark st.	6-in.					400			
“ “	4-in.			5					
Concord ave.	6-in.						2,000		
“ “	4-in.			32					
Congress pl.	1-in.	108							
Gilman st.	6-in.					7			
Heath st.	4-in.					792			
Lamson court.	1-in.	134							
Main st.	4-in.			3					
Maple ave.	4-in.			323					
Marion st.	6-in.				21				
Medford st.	6-in.						871		
“ “	4-in.			8					
Melrose st.	6-in.			28					
Mt. Vernon ave.	2-in.					100			
Mystic ave.	6-in.						2,320		
Newbury st.	6-in.				1,238				
“ “	4-in.			14					
Newton st.	4 and 16-in.								95
“ “	12-in.							62	
“ “	4-in.						116		
“ “	4-in.				490				
Partridge ave.	6-in.			3					
Pearl st.	6-in.						53		
Prospect pl.	4-in.			14					
Prospect st.	6-in.								58
School st.	6-in.					896			
“ “	4-in.			9					
Somerville ave.	4-in.			13					
“ “	6-in.				42				
Carried forward . . .		242		497	1,982	3,220	5,531	62	153

Distribution-Pipes Relaid. — *Concluded.*

LOCATIONS.	Original Size.	2-in.	4-in.	6-in.	8-in.	10-in.	12-in.	16-in.	20-in.
<i>Brought forward</i>		242	.....	497	1,982	3,220	5,531	62	153
Temple st.....	8-in.	.....	.....	.....	.....	86	.....	.....	.....
Tennyson st.....	6-in.	.....	.....	293	.....	.....	.....	.....	.....
Thurston st.....	6-in.	.....	.....	1,384	.....	.....	.....	.....	.....
“ “.....	4-in.	.....	.....	6	.....	.....	.....	.....	.....
Walnut st.....	6-in.	.....	.....	.....	248	.....	.....	.....	.....
“ “.....	6-in.	.....	.....	.....	.....	18	.....	.....	.....
Webster ave.....	6, 14 and 16-in.	.....	.....	.....	.....	.....	.....	.....	638
“ “.....	4-in.	.....	6	.....	.....	.....	.....	.....	.....
Wyatt st.....		.....	.....	43	.....	.....	.....	.....	.....
Chelsea:									
Eldridge pl.....	3-in.	.....	.....	360	.....	.....	.....	.....	.....
Carter st.....	4-in.	.....	.....	.....	450	.....	.....	.....	.....
Maple st.....	4-in.	.....	.....	137	.....	.....	.....	.....	.....
Medford st.....	4-in.	.....	.....	36	.....	.....	.....	.....	.....
Bloomington st.....	4-in.	.....	.....	.....	1,947	.....	.....	.....	.....
Addison st.....	4 in.	.....	.....	1,007	.....	.....	.....	.....	.....
Orange st.....	3 and 4-in.	.....	.....	776	.....	.....	.....	.....	.....
Carmel st.....	4-in.	.....	.....	720	.....	.....	.....	.....	.....
Eden st.....	4-in.	.....	.....	.....	860	.....	.....	.....	.....
Everett:									
Second st.....	6-in.	.....	.....	.....	708	.....	.....	.....	.....
“ “.....	“	173	.....	.....	.....	.....	.....	.....	.....
Cottage st.....	4-in.	.....	.....	187	.....	.....	.....	.....	.....
Tremont st.....	4-in.	.....	.....	758	.....	.....	.....	.....	.....
Everett st.....	4-in.	.....	.....	1,112	.....	.....	.....	.....	.....
Prescott st.....	4-in.	.....	.....	1,035	.....	.....	.....	.....	.....
Totals.....		415	6	8,351	4,789	4,626	5,635	62	791

Extension of Distribution-Pipes.

LOCATIONS.	1½-in.	1½-in.	2-in.	4-in.	6-in.	8-in.	10-in.	12-in.	16-in.	20-in.
Somerville:										
Appleton st.....			13							
Bolton st.....					20					
Broadway.....			10							
“								208		
“								398		
“										39
“						32				
“								21		380
Browning road.....					406					
“ “					6					
Cameron ave.....					11					
Chester st.....			196							
Clarendon ave.....					7					
Clark st.....					5					
Concord ave.....									39	
“ “						541				
“ “					26					
Crown st.....					220					
Cutter ave.....					23					
Day st.....			106							
Fairlee st.....				5	3					
Forest st.....			129							
Fosket st.....							196			
Gilson terrace					165					
Glendale ave.....					252					
Heath st.....					4					
Highland ave.....					11					
“ “					31					
Holts ave.....			130							
Houghton st.....					8					
Kent st.....					6					
Kidder ave.					7					
Lowell st.					10					
Malloy court....		70								
Maple ave.					7					
<i>Carried forward ..</i>		70	584	5	1,228	573	196	627	39	419

Extension of Distribution-Pipes. — *Continued.*

LOCATIONS.	1½-in.	1½-in.	2-in.	4-in.	6-in.	8-in.	10-in.	12-in.	16-in.	20-in
<i>Brought forward</i>	70	584	5	1,228	573	196	627	39	419	
Meacham st.....		65								
Mead st.....					181					
Medford st.....							596			
“ “					16					
Melburn pl.		150								
Montrose st.....					6					
Moreland st.....					19					
Mt. Vernon ave.							172			
“ “ “					8					
Mystic ave.....					42					
Newbury st.....					14					
New Cross st.					7					
Newton st.										439
“ “					12					
Norfolk “					10					
Pearl “					12					
Prospect “					24					
Russell st.....		230								
Simpson ave.....								298		
“ “					6					
Tennyson st.					70					
“ “					15					
Thurston “					18					
Tower “						12				
Tremont “					9					
Union sq.....					15					
Walnut st.....						44				
Walnut st.....					9					
Waterhouse st.....						792				
“ “					63					
Webster ave.....					12					
“ “			15							
Westminster st.....					305					
“ “					6					
Willow ave.								125		
<i>Carried forward</i> ...	70	1,029	20	2,107	1,421	964	1,050	39	858	

Extension of Distribution-Pipes. — *Concluded.*

LOCATIONS.	1½-in.	1½-in.	2-in.	4-in.	6-in.	8-in.	10-in.	12-in.	16-in.	20-in.
<i>Brought forward ..</i>		70	1,029	20	2,107	1,421	964	1,050	39	858
Willow ave.....					8					
Windom st.....					7					
Chelsea:										
Cypress st.....							1,066			
Harvard st.					296					
Murray st.....					180					
Ingleside ave.....					210					
Springvale ave.....					96					
Everett:										
Jackson ave.....					96					
Jefferson ave.....					593					
Clay ave.....					106					
Calhoun ave.....					50					
Spring st.					531					
Broadway.....							700			
Elm st.....					72					
Springvale ave.....					72					
Burdett st.					112					
Timothy ave.....					376					
Summit ave.....					248					
Tremont st.....					216					
Walnut st.....					119					
Orchard st.....					197					
Baldwin terrace.....	150									
Myrtle st.....					436					
Villa ave.....					120					
Rover st.....					284					
Robbins st.....					192					
Rockvalley ave.....					84					
Dane st.....					132					
Greenhalge ave.....					216					
Totals	150	70	1,029	20	7,156	1,421	2,730	1,050	39	858

Hydrants Established and Abandoned.

	ESTABLISHED.	ABANDONED.	Increase.
	Post.	Post.	
Somerville.....	79	21	58
Chelsea.....	15	10	5
Everett	13	1	12
Totals	107	32	75

Water Posts Established and Abandoned.

	Established.	Abandoned.	Increase.	Decrease.	Net Increase.
Somerville.....	2	.....	2		
Chelsea	1	.....	1		
Everett .....	.....	2	.....	2	
Totals	3	2	3	2	1

APPENDIX B.

REPORT OF THE RESIDENT ENGINEER AND
GENERAL SUPERINTENDENT OF THE WEST-
ERN DIVISION.

SOUTH FRAMINGHAM, January 1, 1898.

HON. JOHN R. MURPHY,

Water Commissioner :

SIR: The annual report of the Western Division of the Boston Water Works is herewith submitted.

SUDBURY-RIVER RESERVOIRS.

Water-shed, 75.2 Square Miles.

The rainfall for 1897 was 44.89 inches at Framingham and 46.17 inches at Chestnut-Hill Reservoir. The mean rainfall on the Sudbury-river water-shed, from observations taken at Framingham Centre and Reservoir No. 4, was 46.19 inches, which is about the average for a long period. The rainfall for May, June, July and August was large and very uniformly distributed. There was but one month during the whole year when the rainfall was very small, and that was October, when the gauge at Framingham registered 0.41 of an inch for the month.

The following table shows the average yield of the Sudbury-river water-shed for 1875-96 and the yield for 1897 :

*Yield of the Sudbury-river Water-shed in millions of gallons
per square mile per day.*

Month.	Mean 1875-96.	1897.
January	1.205	0.845
February	1.884	1.067
March	2.871	2.565
April	2.028	1.515
May	1.112	0.915
June	0.469	0.962

Month.	Mean 1875-96.	1897.
July	0.183	0.658
August	0.276	0.591
September	0.247	0.182
October	0.547	0.094
November	0.937	0.909
December	1.021	1.584
Mean	1.065	0.991

RESERVOIR 1.

Grades, H. W., 160.79; Tops of Flash-boards, 159.29 and 158.41; Crest of Dam, 157.54. Area, Water Surface at 159.29, 143 acres; Greatest depth, 15 ft.; Contents, below 160.79, 365,560,000; below 159.29, 288,400,000 gals.

On January 1, 1897, water in this reservoir stood at elevation 156.37. The surface rose, and on the 8th, 9th and 10th, water was wasted over the stone crest of the dam. It soon receded, however, to 156.00, remaining at this level until about March 6, when it rose rapidly, and on the 7th began wasting over the crest. Waste continued until April 2, when both sets of flash-boards were placed in position. On April 8 waste took place over the flash-boards and continued through the gates and over the flash-boards until the 21st. The reservoir remained practically full, with waste occurring at times, until August 3. On August 4 a gate was opened to draw the water out of the reservoir in order to allow the Metropolitan Water Board to prepare for the laying of a new 48-inch main from Reservoir No. 3 to Sudbury Aqueduct below Dam No. 1. The water in the reservoir was lowered to about elevation 148.00, where it remained until the latter part of November. In December the reservoir was allowed to fill, reaching grade 156.75 on December 31.

The highest elevation reached during the year was 159.66 on June 10, and the lowest 145.90 on September 16.

Both sets of flash-boards were placed in position on January 18; they were removed on February 2, replaced on April 2, and finally removed on August 16.

Water was not drawn wholly from this reservoir for the supply of the city during the year. It was drawn partially from this reservoir and from Reservoir No. 2 from 7 A.M., January 1, to 10.40 A.M., May 27, and from 7 A.M., August 3, to 12 M., August 4. It was drawn partly from this reservoir and partly from Reservoir No. 3 from 7 A.M., July 30, to 7 A.M., July 31.

When the reservoir was emptied in the autumn the joints in the stone masonry overflow and in the wing-wall of the overflow and on the side of the gate-house were all thoroughly pointed. The masonry in the gate-house and in the wing-wall of the gate-house on the side next to the reservoir were also pointed where necessary.

The slope paving in front of and adjacent to the overflow was taken out in order to allow the joints of the crest stones at the back of the dam to be thoroughly pointed. Advantage was also taken of the low water to calk five joints in the 48-inch pipe from Dam No. 2, and two joints in the 48-inch pipe from Dam No. 3, where there were leaks. One joint was found from which the lead was partially drawn out and this was thoroughly recalked. About 300 feet of the 48-inch pipe from Dam No. 3, from which the covering had been washed away, was recovered to an average depth of two feet. The 48-inch pipes have been flushed into the river below Dam No. 1 once during the year.

RESERVOIR 2.

Grades, H. W., 167.87; Tops of Flash-boards, 167.12 and 166.49; Crest of Dam; 165.87. Area, Water Surface, at 167.87, 134 acres; Greatest Depth, 17 ft., Contents, below 167.87, 562,580,000; below 167.12, 529,860,000 gals.

On January 1, 1897, the surface of the water in this reservoir stood at elevation 162.63, and on the 12th at 165.72. It gradually receded to 160.35 on February 7. It soon rose again, however, and remained at about 162.50 until March 3 when it rose rapidly.

Both sets of flash-boards were placed in position on March 6, and on the 7th waste began over the tops of the flash-boards. On April 22 an extra set of flash-boards was put in place on top of the regular sets in order to store as much water as possible for the supply of the city. The water rose to 167.88 on April 30, remaining at about this grade until May 27, when it gradually receded to 164.85 on June 9, rising to 167.98 on June 14. By September 3 the water had fallen to 163.05. It was kept between 162.75 and 163.00 on an average until November 12 by drawing, as occasion required, from Reservoirs Nos. 4, 6 and 8. The water then rose to 164.85 on December 8, remaining at about this height until December 15, when it rose and overflowed the lower set of flash-boards on December 16 and continued to overflow until the 26th, the flash-boards being removed on the 28th and 29th. Waste continued over the stone crest, and on December 31 the water stood at elevation 166.03 with waste still continuing.

The highest elevation that the water in the reservoir reached during the year was 168.09 on May 6, and the lowest 160.35 on February 7.

The lowest set of flash-boards was placed in position on March 5, and the upper set on the 6th, and one-half of an extra set was placed on top of the regular flash-boards on April 16, and the remaining half of the additional set was placed in position on the 21st and 22d. All the flash-boards were removed on October 31 in order to point the joints of the stone crest. The lower set was replaced on November 6. On December 28 three bays of the lower set were removed and the remainder on the 29th.

Water for the supply of the city was drawn wholly from this reservoir from 10.40 A.M., May 27, to 11 A.M., July 13; from 7 P.M., November 6, to 10 A.M., November 10; from 11 A.M., November 12, to 11 A.M., December 2, and from 11 A.M., December 9, to 12 M., December 27. The water was drawn partly from this reservoir and partly from Reservoir No. 3 from 11 A.M., July 13, to 7 A.M., July 30; from 7 A.M., July 31, to 7 A.M., August 3; from 12 M., August 4, to 3 P.M., October 24; from 11 A.M., October 26, to 7 P.M., November 6; from 10 A.M., November 10, to 11 A.M., November 12; from 11 A.M., December 2, to 11 A.M., Dec. 9, and from 12 M., December 28, to the end of the year. Water was drawn partly from this reservoir and partly from Reservoir No. 1, as already given under Reservoir No. 1.

While Reservoir No. 1 was emptying in the autumn all of the joints of the crest stones of the overflow of Reservoir No. 2, and all the horizontal and vertical joints of the first three courses below the crest stones in the face of the overflow were thoroughly cut out and pointed with Portland cement mortar. The remainder of the joints in the masonry on the face of the overflow and also the joints in part of the wing wall of the overflow, and on that side of the gate-house facing the overflow, and below high water in Reservoir No. 1, were repointed. Some repairs at the same time were made upon the paving on the embankments of the dam, and about 1,600 feet of fence on Fountain street was built and painted.

The average number of organisms present for the year was 140 against 95 for 1896. The usual spring growth of Diatomaceæ was practically absent. The autumn growth commenced late in August, reached a maximum of 240 on September 9, and decreased throughout the remainder of the year. The growth of Chlorophyceæ commenced in July, reached a maximum of 120 units on July 27, and disappeared early in October. Cyanophyceæ were unimportant except

during August and September when the growth consisted mainly of *Anabæna* and *Clathrocystis*, and reached a maximum of 480 units on August 12. Infusoria were present in small numbers throughout the year. The maximum growth, consisting almost entirely of *Uroglena*, occurred on May 18, and amounted to 400 units per c.c.

RESERVOIR 3.

*Grades, H. W., 176.74; Crest of Dam, 175.24.
Area at 176.74, 253 acres; Contents, below 176.74, 1,203,180,000 gals.
Area at 175.24, 248 acres; Contents, below 175.24, 1,081,500,000 gals.
Greatest depth, 21 feet.*

On January 1, 1897, water in this reservoir stood at grade 174.82. On the 5th it rose to the stone crest and began flowing over the dam. It ceased overflowing on the 18th, but rose and fell alternately until March 13, and then continued to rise until April 1, when one set of flash-boards was placed on the crest. On April 20 a second set of flash-boards was placed in position and water wasted over the top of this set until August 1, after which time the surface receded to 168.80 on September 23. On the 27th it rose to 169.19 and was kept at about 169.25 by drawing from Reservoir No. 5 until November 7; then it gradually rose to 170.55 on the 27th. It was at grade 174.74 on December 31.

The highest elevation that the water in the reservoir reached during the year was 176.80 on July 2, and the lowest 168.80 on September 23.

The first set of flash-boards was placed in position on the stone crest on April 1, one-half of the second set on the 17th, and the other half on the 20th. All the flash-boards were removed on December 11. The top of the first set of flash-boards is at elevation 175.86, and the top of the second set at elevation 176.50.

Water for the supply of the city was drawn wholly from this reservoir from 5.40 P.M., October 25, to 11 A.M., October 26. Water was drawn partly from this reservoir and partly from Reservoirs Nos. 1 and 2 on dates already given.

In order to increase temporarily the storage capacity of Reservoir No. 3, pin-holes were drilled in the stone crest and iron pins fixed in position to hold flash-boards. This work was done early in the spring.

The average number of organisms for the year was 859 against 506 for 1896. The spring growth of *Diatomaceæ* commenced about the first of April, reached a maximum of 2,096 units per c.c. on June 30, and decreased during July. These organisms were present in large numbers again from

the first of October to the end of the year. Chlorophyceæ were present in moderate numbers from May until the end of the year. The maximum of 90 units per c.c. was reached on August 25. Cyanophyceæ appeared in April and were abundant in June. The growth increased after July 15, reached a maximum of 640 units on September 15, and disappeared about the first of December. The growth consisted of Clathrocystis, Coelosphaerium, Microcystis and Anabæna. Infusoria were present in large numbers throughout the year. Uroglena constituted almost entirely the large growth which extended from May 19 to July 7, and which reached a maximum of 4,515 units.

RESERVOIR 4.

Grades, H. W., 215.21; Tops of Flash-boards, 215.21 and 214.89.; Crest of Dam, 214.21. Area, Water Surface, at 215.21, 167 Acres; Greatest Depth, 49 feet; Contents, below 215.21, 1,416,350,000 gals.

On January 1, 1897, the surface of the water in this reservoir was at elevation 195.11. It rose to 213.90 on April 2, when both sets of flash-boards were placed in position. It continued to rise, and on April 10 water was flowing over the tops of the flash-boards and continued to overflow, portions of the upper set of flash-boards being removed from time to time to prevent the water in the reservoir from rising too high. On July 1 a gate was opened to draw water into Reservoir No. 2. The surface had fallen to 208.24 on July 23 when the gate was closed. The surface then rose to 210.31 on September 5, when the gate was opened again. It then receded, with slight rises at times as the gate was opened and closed, reaching grade 200.96 on November 2, when the gate was finally closed for the year, except for one day at the last of the month. The surface stood at elevation 209.98 on December 31.

The highest elevation reached during the year was 215.51 on May 12, and the lowest, 195.11 on January 1.

Both sets of flash-boards were placed in position on April 2, and on July 13 the flash-boards were removed.

For several years it has been noticed that the berm at the foot of the slope paving, on the water side of the embankment, was gradually disappearing, and at places was lowered by the action of the ice and waves. Accordingly, when the water was lowered sufficiently in the autumn, a large quantity of stone was brought on rafts to the berm and put in place, and its width and grade restored. This work was completed from the overflow to a point 300 feet west of the gate-house,

a distance of about 650 feet. More of this work must be done as occasion allows.

The stone masonry at the outlet of the two 48-inch pipes was pointed during the autumn. The gate-house was provided with a new door.

Work on the Cold-spring brook channel near Main street, which was in progress at the beginning of the year, was finished about March 1. The abutments of the bridge over the channel at Main street were entirely rebuilt from the foundations, a difficult work on account of quicksand. Their lower portions were laid in cement mortar and their upper portions were pointed only. A new bridge of wood was built across the stream.

The average number of organisms for the year was 90 against 103 for 1896. The organisms throughout the year were small. The spring growth of Diatomaceæ commenced in the middle of May, reached a maximum in the middle of June, and disappeared July 6. The autumn growth commenced in October and continued throughout the year. Chlorophyceæ were present from May until the end of November. They were most abundant during August and September, when they reached a maximum of 80 units. Cyanophyceæ growths were unimportant. Infusoria were present in small numbers throughout the year. A growth of Uroglæna amounted to 400 units in the surface sample on April 6.

RESERVOIR 5.

*Grades, H. W., 250.00; Top of Stone Crest, 249.00. Estimated Area 1,258 acres;
Estimated Contents, 7,609,000,000 gals.*

The construction of this reservoir was begun by the city of Boston, but it was seized by the Metropolitan Water Board on January 4, 1896. While the construction of this reservoir is in the hands of the Metropolitan Water Board, the water has been considered by common consent to be under the control of the city of Boston.

Owing to the completion of the sections in the lower portion of the reservoir, 1,700,000,000 gallons were stored during the winter and spring of 1896-97 for a reserve for the use of the city. The reservoir was filled to a point within 16 feet of the top of the overflow, but owing to the ample rainfall it became necessary to use only a small portion of the water during the past year. The reservoir has been practically completed and will be filled to the overflow by April, 1898.

The average number of organisms for the year was 149. The spring growth of Diatomaceæ commenced April 12, reached a maximum of 180 units on May 17, and disappeared the first of June. The autumn growth commenced September 22, reached a maximum of 460 units on October 27, and decreased to the end of the year. The most important form was *Asterionella*. Chlorophyceæ appeared April 12 and continued in small numbers throughout the year. The maximum of 70 units was reached in April. *Gonium* has been a characteristic form. Cyanophyceæ appeared August 11, reached a maximum of 230 on August 18, after which they decreased rapidly and remained only in small numbers during the remainder of the year. Infusoria were present in small numbers throughout the year. During April and May they were present to the extent of about 100 units. The amorphous matter was very high from the time the samples were first collected until the middle of May, on account of filling the reservoir.

RESERVOIR 6.

Grades, H. W., 295.00; Tops of Flash-boards, 304.67 and 305.00; Crest of Dam, 294.00; Area, 185 acres; Contents, 1,520,900,000 gals.

On January 1, 1897, the surface of the water in this reservoir was at elevation 266.42. It gradually rose to 294.00 on May 16, when the first set of flash-boards was put in position. The second set was added on the 19th. On June 7 water began to waste over the flash-boards and continued to overflow until July 3, when an outlet gate was opened. From this date until October 7 the water was kept just below the top of the flash-boards, by wasting on Sunday into the brook, which was found not to interfere with the work on the new channel. After October 7, work in the new channel being finished, the gate was kept open nearly all the time, and water fell from 294.77 on the 7th to 291.62 on November 4. On December 13 the gates were finally closed, and at that time the water stood at 292.12. The water then rose, and both sets of flash-boards having been removed it began to flow over the stone crest on December 16, and continued to overflow until the end of the year.

The highest elevation reached during the year was 295.32, on June 12, and the lowest, 266.33, on January 2.

Owing to the presence of *Clathrocystis* in this reservoir, all of the supply which was drawn for the city from the first week in August to November 27 was filtered through filter-beds Nos. 1, 2, 3 and 4 for the purpose of removing algæ.

On account of the work of excavation on Indian-brook channel, and the presence of algæ in the water, this reservoir was not lowered during the year as much as usual.

Early in the season a line of bench levels was run between Dam No. 6 and the permanent bench-marks on the line of Sudbury river. The connection which had previously been made with less precaution to ensure minute accuracy, was proved to be correct.

For several years the city has been compelled to pay damages to Mrs. Levina K. Howes for flooding her land, which lies on both sides of Indian brook, when water was being drawn from the reservoir. This flooding could only be prevented by excavating a capacious channel through her land, and extending it a few hundred feet further, through land of Emma E. Bowker to the falls. No arrangement could be made with Mrs. Bowker for her land, and accordingly a seizure was made of 2.75 acres.

On July 6 a day force was placed on this work, and continued until October 1. For a length of 950 feet a rectified channel was excavated, 14 feet in width at bottom, with side slopes of 3 horizontal to 1 vertical, having a capacity of 100 cubic feet per second when the water is a foot below the surface of the meadow. The next 200 feet or more of channel was through a mass of boulders, and its section was made 20 feet wide at bottom with very steep side slopes. For 380 feet further down stream the old bed of the brook was enlarged and deepened by removing boulders and stones. At Cross-street bridge it was intended to widen and deepen the channel and build new abutments for the bridge, but the selectmen of Ashland insisted that the city should build a stone arch. The plan was therefore changed, and the channel was deepened temporarily by building a wooden flume between the abutments.

In September a small force was employed on improving the grounds at the south end of the dam and near the attendant's house. The work was not entirely finished.

While the filter beds were in use during the autumn the water on Bed No. 1 almost disappeared at one time, and it was found that the wall of an old cellar, which was just below the surface of the bed and which extended under the edge of the outside embankment, was acting as a blind drain. This wall which was about 3 feet deep and 24 feet long, was removed and the hole filled with gravel.

The average number of organisms for the year was 536 against 137 for 1896. Diatomaceæ appeared in June, and continued in moderate numbers throughout the year. Chlo-

rophyceæ appeared in April, and continued in small numbers throughout the year. Cyanophyceæ mainly *Clathroecystis*, appeared in large numbers on July 27, reached a maximum of 2,630 on October 12, and decreased during the remainder of the year. Infusoria were present throughout the year, but were unimportant except from April to June and during August and September.

RESERVOIR 8.

Grades, H. W., 327.91; Bottom of Gates, 317.78.

Area at 327.91, 601 acres; Contents, between 327.91 and 317.78, 1,256,900,000 gals.

II. W. of temporary Dam., 329.91; Contents at 329.91, 1,654,800,000 gals.

On January 1, 1897, the surface of the water in this reservoir stood at elevation 324.77 or 3.14 feet below old high water. On February 2 it reached grade 325.45, when the outlet gate was opened to lower the water for aiding work on the coffer-dam. The water fell to 325.29 on March 4 when the gate was closed. The water then rose to 328.66 on July 8, when the gate was opened again to feed Reservoir No. 2. The water rose and fell alternately, remaining generally at about grade 326.50 until December 31, when it stood at 326.43.

The highest elevation reached during the year was 328.76 on June 15, 20 and 21, and the lowest 324.77 on January 1 and 2.

The work of increasing the storage of this reservoir was alluded to in the last annual report. It was commenced on December 28, 1896, by the driving of sheeting at the site of the dike.

On account of the fact that the completion of Reservoir No. 5 had been unavoidably delayed, it was necessary to store as much water as possible at other points on the works, and it was decided to raise the level of the pond two feet by the construction of another dam and a dike and other work connected therewith. Work on the dike was finished on March 4, 1897. The raising of a road, including the building of a culvert, was begun on January 22, and finished on February 23. The building of the coffer-dam, just above the site of the old dam, was begun on January 15 and finished March 18. The work of erecting this coffer-dam was very difficult on account of the presence of a large quantity of boulders at the bottom of the reservoir, making it difficult to drive the 4-inch sheeting. A great many of the boulders had to be removed, and some were blown out with dynamite before the sheeting could be driven. The coffer-dam was internally

braced and filled with earth. The raising of the water line two feet flooded quite an amount of land which was covered with brush and trees. Arrangements were made with the various owners of the land bordering on the reservoir to remove the timber, and in consideration of their taking the wood they were obliged to remove the brush. From June 1 to July 3 men were employed in clearing away the rubbish, filling cellars and grading grounds on the site of the Wood shoe factory and of the houses bought by the city on Exchange street.

The bulkhead and gates in the outlet flume of the reservoir, which were old and weak, were removed, and a new bulkhead and gates built and put in place.

In July the overflow of the first mill-pond below Reservoir No. 8 was thoroughly rebuilt and a new gate erected at the entrance to the waste pipe.

The average number of organisms at the dam was 386, on the shallow portions of the reservoir 341, and at the upper 241. Diatomaceæ were present in small numbers throughout the year. Chlorophyceæ have been most abundant in the shallow flowage, especially during February, April, May, September and October. With the exception of a single sample, taken during February, which contained 1,020 units of *Gloescystis*, the maximum was 200 units. Cyanophyceæ were present in considerable quantity near the dam, especially during June, September and October. Infusoria have been present at various times in large numbers at all parts of the pond. A growth of *Mallomonas* occurred during August at some depth below the surface in the upper pond, and reached a maximum of 2,209 units. In the shallow portion Infusoria were abundant during February and again during May, when they reached a maximum of 900 units; *Uroglena* were present during September and October, and reached a maximum of 1,200 units on October 11. At the dam, Infusoria were abundant during March and April and the first part of May; *Uroglena* appeared about September 20, reached a maximum of 2,012 on October 11, and disappeared during November.

FARM POND.

Grades, H. W., 149.25; Low Water, 146.00.

Area at 149.25, 159 acres; Contents, between 149.25 and 146 00, 167,520,000 gals.

On January 1, 1897, the water in this pond stood at elevation 148.78, on March 25 at 149.40, and was kept at about 149.00 until September 11.

The highest elevation reached during the year was 149.50 on April 16 to 22 inclusive, and the lowest 147.84 on December 1.

No water has been drawn from this pond for the supply of the city. Owing to the fact that the flow of 1,500,000 gallons, which is required by law to be wasted into the river every day, could not be drawn from Reservoir No. 1 while the trench for the 48-inch pipe was being sunk into the bed of the stream just below Dam No. 1 by the Metropolitan Water Board, arrangement was made to draw this amount of water from Farm pond from September 14 to December 1. Owing to this draught, the pond fell to 147.88 on October 24 and 147.84 on December 1. The pond was partially refilled after the above dates by water drawn from Reservoirs Nos. 2 and 3. On December 31 the pond stood at grade 148.70.

The Framingham Water Company has pumped 117,600,000 gallons during the year, an average of 322,192 gallons daily.

The total waste into the river from Farm pond during the year was 117,200,000 gallons.

During the autumn the coping stones at the entrance to Farm-pond sluice were anchored by iron rods to timbers laid in concrete, to prevent them from being moved by ice.

LAKE COCHITUATE.

Grades, H. W., 134.36; Invert of Aqueduct, 121.03; Top of Aqueduct, 127.36.

Area, Water Surface at 134.36, about 776 acres.

Contents, between 134.36 and 127.36, 1,608 300,000; between 134.36 and 125.00, 1,908,200,000 gals.

Approximate Contents, between 134.36 and 121.03, 2,447,000,000 gals.; between 134.36 and 117.03, 2,907,000,000 gals.

On January 1, 1897, the water in the lake stood at elevation 127.43, or 6.93 feet below high water mark. By drafts from the Sudbury source the water was raised to 134.35 on April 10. Between April 11 and 16 the waste gate at the dam was opened to prevent the water rising too far. From April 16 to June 27 the water was maintained above elevation 134.00; it then receded gradually, with slight gains at times due to drafts from the Sudbury source, dropping to 129.42 on November 1. It then rose slightly, but remained below 130.00 until December 15, after which it rose quite rapidly for a time, and was at 130.84 on December 31.

The total waste from the lake at the outlet was 117,000,000 gallons, all during the month of April.

The following table shows the amounts of water drawn into the lake from the Sudbury reservoirs during the year:

	Gallons.
January	210,500,000
February	4,000,000
March	462,200,000
April	31,500,000
May	9,700,000
July	66,200,000
August	163,900,000
Total	948,000,000

Owing to the widening of the Boston & Albany Railroad in 1896 a large mud bank was formed on the northerly side of the railroad, reaching within a few feet of high water mark. This mud bank was covered with four inches of clean, coarse gravel in the month of January.

The average number of organisms in the lake water for the year was 698, against 569 in 1896. The spring growth of Diatomaceæ was large and long continued, extending from April to July. It reached a maximum of 710 on June 15, which was considerably later than usual, owing to the colder spring weather. They were not abundant again until the appearance of the autumn growth about the first of October, continuing until the end of the year. The spring growth consisted mainly of Tabellaria, and the autumn growth of Tabellaria, Melosira and Asterionella. There have been no growths of Chlorophyceæ of any importance. They were present in January and February and reappeared on the first of June, the maximum autumn growth amounting to 575 on October 25, which consisted of Aphanizomenon. Infusoria were present in considerable numbers throughout the year. They were particularly abundant during January, April and the autumn months. The general forms were Synura, Glenodinium and Dinobryon. Crenothrix was present at the bottom as usual throughout the year. It was present at the surface about the first of April and at the time of the overturn about the middle of November.

The Pegan filters have been in use almost continuously during the year. The following table shows the total number of gallons pumped and the amount delivered to each bed:

1897. MONTH.	No. of Days Pumps were run.	AMOUNT OF WATER PUMPED.		AMOUNT OF WATER DELIVERED ON BEDS.			
		Total for Month.	Average for each Day Pumps ran.	No. 1.	No. 2.	No. 3.	No. 4.
		Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.
January ...	31	24,106,000	777,600	8,700,000	5,022,000	10,384,000	
February ..	27	24,008,000	889,200	6,609,000	3,791,000	13,608,000	
March	29	28,447,000	980,900	7,808,000	4,471,000	14,742,000	1,426,000
April	30	26,827,000	894,200	1,231,000	940,000	3,499,000	21,157,000
May	30	22,615,000	753,800	6,772,000	1,620,000	11,178,000	3,045,000
June	28	23,036,000	822,700	6,804,000	.....	.....	16,232,000
July	23	16,330,000	710,000	356,000	.....	11,243,000	4,731,000
August. ...	19	16,654,000	876,500	.....	.....	.....	16,654,000
September .	14	12,506,000	893,300	.....	.....	.....	12,506,000
October	9	7,808,000	867,600	.....	.....	.....	7,808,000
November .	20	18,630,000	931,500	2,462,000	1,037,000	.....	15,131,000
December..	26	28,998,000	1,115,300	7,841,000	4,018,000	8,586,000	8,553,000
For year...	286	249,965,000	874,000	48,583,000	20,899,000	73,240,000	107,243,000

The total amount of coal used during the year was 282,030 pounds ; 886.3 gallons were pumped per pound of coal.

All of the water of Pegan brook was filtered during the year and none ran over the waste way. The area available for filtration was much reduced by the new location of the Boston & Albany Railroad, which passed through the filter beds, and it was found impossible to stop the flow upon any bed long enough to clean it. It is also necessary to maintain a greater depth of water upon the beds than was originally intended. By an arrangement with the Boston & Albany Railroad, water was pumped on to a large area of land west of Bed No. 3 and between the old and new locations of the railroad, and on March 30 water was delivered on to this area, which has been used from time to time as convenience required. This area is designated in the table as Bed No. 4. Surveys, plans and estimates have been made for a new bed to restore the capacity lost by the new location of the Boston & Albany Railroad.

The following is a statement of land taken by the Boston & Albany Railroad :

Land east of filter beds, formerly owned by David M. Whitney, 48,800 square feet.

Remaining area east of filter beds, formerly owned by Willard C. Childs, 52,370 square feet.

Area across filter beds, 42,900 square feet.

Area west of filter beds to Lake Cochituate, 32,775 square feet.

Total, 176,845 square feet.

Feeders of Lake Cochituate.

Means of Monthly Observations (1897).

	Temperature. Fahr.	Color.	Organisms. ¹	Amorphous. ¹	Bacteria. ²
Beaver Dam brook	51.1°	1.12	313	215	446
Beaver Dam brook (last culvert) ...	52.6	1.02	97	291	387
Course brook	53.3	1.00	126	167	339
Dug pond.....	53.1	0.21	889	219	383
Circular dam	52.5	1.01	182	215	464
Pegan brook.....	53.3	0.18	146	320	2,096
Snake brook	52.6	0.71	78	362	1,375

¹Standard units per c.c.

²Number per c.c.

DUDLEY POND.

Grades, H. W., 146.46; 18-inch Pipe, 130.36 and 127.36.

Area, Water Surface, 81 acres; Greatest Depth, 27 feet; Contents, above 130.36, 250,000,000 gals.

On January 1, 1897, water in this pond stood at an elevation of 143.16, 3.3 feet below high water mark, and on December 31 it was at grade 143.24. No water has been drawn from the pond during the year.

SUDBURY-RIVER AQUEDUCT.

Grades, 141.35 at Farm Pond; 124.05 at Terminal Gate-House.

Length of main aqueduct, 15.89 miles; size, 7 ft. 8 in. × 9 ft.; present capacity, 86,000,000 gals. in 24 hours.

The three parts of this aqueduct are in good condition. The main aqueduct has been in use 354.2 days, and the supply aqueduct from Dam No. 1 to Farm pond 356.9 days, as it was necessary to run water into Farm pond several times

while drawing the daily flow of 1,500,000 gallons from that pond. The flow in the aqueduct has been stopped for cleaning, and to put in and remove the coffer dam in the supply aqueduct at the entrance of the chamber at the end of the new 48-inch main at Reservoir No. 1, on account of the Metropolitan Water Works; it has also been stopped for purpose of making preparations for cleaning the southerly pipe at the Rosemary siphon; in all, twelve times during the year.

The amount of water sent to the city has been 15,451,100,000 gallons, a daily average of 43,332,000 gallons. In addition to the above, 948,000,000 gallons have been supplied to Lake Cochituate.

At the Rosemary siphon, between August 31 and September 3, the tubercles were carefully removed from the interior of the southerly 48-inch main. The pipe had been in use about twenty-one years. The inside surface was about half covered with tubercles. These were carefully scraped off with special wooden tools, so as to not injure the tar coating under the tubercles. Fifteen cubic feet of tubercles were wheeled out, and the pipe carefully washed and brushed. Fifteen men were employed for four days in cleaning the pipe, which is 1,800 feet in length. Eighteen joints were pointed with Portland cement, mixed with one part of sand. They were from one to two inches in width and $1\frac{1}{2}$ inches in depth.

On October 11, Course brook waste-weir, the Rockland tunnel, Badger Hill tunnel, Waban bridge and Bacon's and Fuller's waste-weirs were cleaned. They were all covered with a dirty, black deposit, and a large quantity of sponge was removed from the bottoms of the tunnels.

The supply and Farm-pond aqueducts were cleaned twice by machine, on April 28 and September 30. The main aqueduct was cleaned by machine from Farm pond to the west siphon chamber on October 25 and 26. The length was 10.25 miles. The aqueduct was very dirty and covered with a black deposit. A large amount of sponge was found on the bottom and sides, extending to a level about one foot above the skew-back. The easterly part of the aqueduct could not be cleaned at this time, owing to work which the city of Newton was carrying on below Clark's waste-weir.

On December 28 the Beacon-street tunnel was carefully examined for its entire length. No fallen stone was found except about three cubic feet at Station 783+50, in the slate section, and one cubic foot at Station 789+25.

The old flap-gates at the east siphon chamber were replaced with new ones of kyanized spruce.

COCHITUATE AQUEDUCT.

Grades, 121.03 at Lake; 116.77 at Brookline Reservoir. Length, 14.60 miles; Size, 5 ft. x 6 ft. 4 in.; Capacity, 16,000,000 gals. in 24 hours.

This aqueduct has been in constant use during the year, except from 5 P.M., April 11, to 5 A.M., April 15, when the flow was stopped for cleaning. The aqueduct was cleaned at this time from Lake Cochituate to the influent gate-house at Chestnut-Hill Reservoir. From the lake to Station 130 the interior was covered with large patches of sponge and a great quantity of black deposit; this section had to be washed twice. From the siphon at Charles-river bridge easterly the sponge gradually diminished. On October 21 and 22 the portion of the aqueduct from the intermediate gate-house to the Brookline Reservoir was cleaned. On December 14 two new galvanized-iron gate-rods were put into Webbers's waste-weir. A depth of six and one-half feet at the lake has been maintained in the aqueduct throughout the year, except for the first five days in January, when the lake was not high enough to furnish this flow.

In May the city of Newton laid a sewer-pipe over the aqueduct in the Newton Boulevard near Chestnut-Hill Reservoir. The pipe was ten inches in diameter and thirty-six feet in length, with leaded joints, with a sub-drain four inches in diameter. The pipes were encased in Portland cement concrete, ten inches in thickness, to prevent any possible leakage into the aqueduct.

The leakage at Waban bridge has been the same as in previous years. The frequent freezings and thawings have acted upon the cement joints in the masonry on the exterior, and also on the interior below the bottom of the aqueduct. It will be necessary during the coming year to point the granite belting courses and the exterior of the brickwork. The asphalt covering also requires to be renewed.

The granite belting courses on the Charles-river bridge need repointing; also portions of the granite-work on the north and south sides of the structure. Some of the external brickwork also needs repairing. At the top of the pilasters the bricks are cracked, and portions are falling out. The concrete on top of the bridge also should be renewed.

The following repairs have been made during the year: Bacon's and Fuller's waste-weirs were scraped, pointed and painted with asphalt paint by the aqueduct force; a con-

siderable amount of fencing has been built, and the whole extent of the line has been mowed from South Framingham to Newton Centre; the culverts have been kept in good order, and the channels leading to and from them cleaned out.

CHESTNUT-HILL RESERVOIR.

Grades, H. W., 124.00; Dam, 128; Effluent pipes, 99.80.

Area, Lawrence Basin, 37.5 acres; Contents, 166,000,000 gals.; Area, Bradley Basin, 87.5 acres; Contents, 391,000,000 gals.

Total Contents above grade, 100.00, 557,000,000, gals.

In November the Metropolitan Water Board began the laying of two lines of 48-inch pipes through the grounds on the southerly side of the Bradley basin. During the summer a road was constructed from Commonwealth avenue to the reservoir driveway, through the old right-of-way known as Brown's lane. The street was built by representatives of Margaret Wade, and was constructed on the lines given by the Street Laying-Out Department. As it was extremely undesirable that a road should enter the driveway, a fence was built across the end of the road, and although the owners of the land threatened to remove the fence this was not done. Later, plans were prepared for the taking of the land necessary to protect the driveway at this point. The driveway entering Commonwealth avenue on the north-west side of the Lawrence basin was closed to travel during the year owing to the danger threatening bicyclists at this point. The driveways and buildings have been properly cared for during the year, but the large amount of new work upon which the Metropolitan Water Board is entering has made more or less confusion in different portions of the grounds, especially east of the pumping station. Late in the autumn the carriage shed at the westerly end of the pumping station and the shrubbery surrounding the station were removed preparatory to the construction of the extension of the pumping station by the Metropolitan Water Board.

The area of water works' land taken by the Street Department for the extension of Commonwealth avenue was ascertained to be 104,528 square feet. The extension of this boulevard was referred to in the last annual report.

In March some experiments were made under my direction by Mr. Charles W. Sherman, Assistant Engineer, on losses of head due to friction in the 30-inch force main. The velocities ranged from 0.75 to 5.1 feet per second. The pipe was laid in 1887, and its length is 5,740 feet. The quantity of water flowing was measured over the 5-foot weir at Fisher Hill. The losses of head were determined by the

readings of piezometer gauges placed on the pipes. The coefficient c in the Chezy formula $v = c (RS)^{\frac{1}{2}}$ was found to be 103 +, corresponding to Kutter's coefficient for roughness $n = .0133$.

At the same time a single experiment was made on the 36-inch pipe, which showed its condition to be about the same as at the time of the test made last year. The following table gives the results of the several experiments on both pipes:

PIPE.	Date of Experiment.	c .	n .
30-inch pipe 5,740 feet long laid in 1887	1888	111	.0124
	1897	¹ 103	.0133
36-inch pipe 5,500 feet long laid in 1894	1895	136	.0107
	1896	¹ 113	.0125
	1897	² 114	.0126

¹ Mean of a series of observations.

² One experiment.

It appears that the condition of the 30-inch pipe in 1888, one year after laying, was about the same as that of the 36-inch pipe in 1897, three years after laying. Both of these pipes were opened by the Metropolitan Water Works in December, for the purpose of making connections, and an examination of the pieces taken out showed the interior condition of the pipes to be quite similar as far as the organic growth of plant and animal life was concerned. On the 30-inch pipe the iron tubercles were nearly twice as large as those on the 36-inch pipe.

It is probable that the rapid deterioration in the first year or so after the large mains were laid is due to growths of protozoa, sponge, etc., and the formation of incipient iron tubercles; and the subsequent slow increase in frictional resistance is due to the growth of the tubercles.

Measuring tapes of steel were tested during the year by comparison with the standard of length at Chestnut-Hill Reservoir for the Massachusetts Topographical Survey Commission, the Engineering and Street Laying-Out Departments of the city of Boston, the Engineering Departments of the cities of Cambridge and Newton, and the Metropolitan Water Works. This work has been done free of charge. A

number of levelling rods have also been tested for the Metropolitan Water Works.

The number of organisms in the samples collected during the year at the effluent gate-house averaged 366, against 224 for 1896. The number of organism, in the samples collected during ten months from the surface, mid-depth and bottom of the middle of the reservoir, averaged 373, against 245 for a period of nine months during 1896. Diatomaceæ appeared during the last of April, reached a maximum of 685 units on June 21, and were present in considerable numbers throughout the remainder of the year. Chlorophyceæ were present from April until the middle of December. They reached a maximum of 70 units on July 23. Cyanophyceæ appeared during the last of May, and continued throughout the remainder of the year. The maximum growth amounting to 250 units occurred on October 18. Infusoria were present throughout the year, and were especially abundant during May, June and August. The maximum growth of 195 units occurred May 1. During August there was a considerable growth of *Synura*, which was unusual, as *Synura* is generally abundant only in cold weather.

CHESTNUT-HILL PUMPING STATION.

Two Gaskill Pumping Engines, Capacity, 8,000,000 gals. each per day, and one Leavitt Pumping Engine, Capacity, 20,000,000 gals. per day.

During September, the work on the extension of the pumping station was commenced by the Metropolitan Water Board preparatory to the installation of the new 30-million-gallon pumping engine to be furnished by the E. P. Allis Company of Milwaukee.

The dynamo engine, which was furnished by the lighting department of the city, was found not to be up to the contract capacity. It was tested by Messrs. Dean and Main. A new engine was afterwards put in place.

The extensive repairs on Gaskill Engine No. 1 by the Lockwood Manufacturing Company were completed early in the present year, and Gaskill Engine No. 2 has been overhauled and put into good condition.

During the year stuffing boxes were placed upon the plungers of the pumps connected with the Leavitt engine. It was found that a considerable amount of water was passing around the plungers, due to wear on the bottom, which gave

a very large slip. The following table shows the decrease in slip due to the repairs :

Time.	Speed, Revolutions per Minute.	Slip.
Before repairs {	50.3	6.77 p. c.
	37.4	8 05 p. c.
After repairs {	36.8	3.05 p. c.
	33.7	4.18 p. c.

The Metropolitan Water Board makes a seizure of this pumping station on January 1, 1898, and it now passes into the control of that Board.

BROOKLINE RESERVOIR.

Grade, H. W., 124.00; Area, 23 acres; Greatest depth, 24 feet; Contents, 115,000,000 gals.

Everything in connection with this reservoir is in good condition. The Metropolitan Water Board laid a 42-inch main across the reservoir grounds at the westerly end, and this work has somewhat disturbed the condition of the grounds. No special work of maintenance has been done at this point during the year.

FISHER-HILL RESERVOIR.

Grades, H. W., 241.00; Pipe inverts, 220.00; Depth, 21 feet; Contents, 15,400,000 above 223.00.

This high service reservoir is in good condition. It was maintained during the year by the force at Chestnut-Hill Reservoir. The 10-foot weir at the reservoir was built of wood and was intended only as a temporary expedient for measuring the flow from the pumps at the pumping station. I recommend its removal under proper supervision as soon as it can conveniently be undertaken.

INSPECTION OF WATER SOURCES.

The following is a summary of the work of the Inspection of Pollution Department for the year 1897, Mr. John S. Concannon, Chief Inspector :

Total number of cases inspected :

Old cases	597
New cases	2
Total	599
Eliminated during 1897	100
Remaining cases	499

Present condition of all cases :

Remedied	192
Present safe	291
Seem safe	4
Suspected	4
Unsatisfactory	8
	499

Cases in which sewer connections were made :

There were in Natick	29
“ Framingham	5
“ Westborough	4
“ Marlborough	7
Total	45

These forty-five sewered cases are included in the 192 remedied cases, and, in the regular order, would not be reported as “Eliminated” until January, 1899.

There are eight unsatisfactory cases, located as follows :

Marlborough	4
Natick	1
Cordaville	1
Southborough	1
Westborough	1

There are four suspected cases, located as follows :

Natick	3
Southborough	1

BIOLOGICAL LABORATORY.

The laboratory is now under the charge of F. S. Hollis, Ph.D. During the year 1897, 1,921 microscopical and 1,749 bacteriological examinations of water were made at the laboratory. Of the microscopical examinations, 1,675 were of the regular weekly samples, and 246 were in connection with special investigations of the sources of supply. Samples for bacteriological examination have been taken regularly from the middle of Chestnut-Hill Reservoir, the gate-houses at Chestnut Hill Reservoir, tap at Park square in Boston, and occasionally from the sources of supply. In addition to the sources before examined, samples have been taken regularly during the year from Reservoirs Nos. 5 and 8.

Special attention has been given, as in former years, to following the indications obtained from the analyses of the regular samples and tracing them to their original sources and studying the causes. As examples may be mentioned the study of the occurrence of *Uroglena* in Reservoirs Nos. 3 and 8 of *Clathrocystis* in Reservoir No. 6, and of *Synura* in Lake Cochituate. No water was drawn from these sources for use while the growths were abundant.

The degree of turbidity of the water of Reservoir No. 5, resulting from filling the newly stripped area and from work still in progress at the upper end, has been studied by means of frequent series of disc readings. The study of stagnation phenomena has been made by means of the regular series of temperature observations and color readings taken at the different sources. Color readings have been taken frequently as an aid in regulating the flow of water from the Sudbury and Cochituate aqueducts through the distributing reservoirs.

Boston Tap Water.—The average number of organisms for the year was 351 against 182 for 1896. Diatomaceæ were present in considerable numbers throughout the year. They were present to the extent of 953 units in June, and of 450 units in November. Chlorophyceæ were unimportant, but were present throughout the year. Cyanophyceæ were present throughout the year, except during the latter part of March and during April. They were most abundant from July to the end of the year, reaching a maximum of 500 on August 30. Infusoria were present throughout the year, amounting to 240 units on April 20, and 225 units on November 16.

Opportunities have occurred during the year for the examination of growths in the Sudbury aqueduct, the conduit leading from Chestnut-Hill Reservoir to Brookline Reservoir, and the 30-inch and 36-inch mains leading from the Chestnut-Hill Reservoir to Fisher-Hill Reservoir. Considerable information of interest has been gained by these examinations. •

During the year the form heretofore provisionally called *Anabæna* (sterile), which is characteristic of Lake Cochituate, has been definitely identified as *Aphanizomenon flos aquæ*. This identification was confirmed by Prof. W. G. Farlow.

The following tables give, first, the average condition of the tap water shown by the chemical analyses made under the direction of the State Board of Health, and secondly, the averages of monthly analyses of the sources of supply; then follow the biological tables giving the results of these works at

the laboratory at Chestnut-Hill Reservoir. Following these tables are the usual tables of detailed expenditures and of rainfall.

As nearly all of the works connected with what has been known as the Western Division of the Boston Water Works pass to-day into the control of the Metropolitan Water Board, this is the last report that will be made of these works under the control of the city of Boston. The undersigned has had immediate charge of this division for the past twenty-five years, and has seen the consumption grow from 15,000,000 gallons daily from the Cochituate works in 1872 to 60,000,000 gallons daily from the Sudbury and Cochituate works in 1898.

Very truly yours,

DESMOND FITZGERALD,

General Superintendent.

Average Condition of Tap Water, Boston, 1897. (State Board of Health).

PARTS IN 100,000.

LOCALITY.	COLOR.		RESIDUE ON EVAPORATION.			Chlorine.	NITROGEN.						Oxygen consumed.	Hardness.
	Nessler scale.	Platinum scale.	Total.	Loss on ignition.	Fixed.		Albuminoid Ammonia.				Nitrites.	Nitrates.		
							In solution.	In suspension.	Free Ammonia.					
										Total.				
Service pipe, State House	0.65	0.55	4.82	1.84	2.98	0.40	.0193	.0177	.0016	.0009	.0001	.0137	0.64	1.6

Average of Monthly Analyses, January 1 to December 31, 1897.

PARTS IN 100,000. (STATE BOARD OF HEALTH.)

LOCALITY.	COLOR.		RESIDUE ON EVAPORATION.			Chlorine	NITROGEN.					Oxygen consumed.	Hardness.			
	Nessler scale.	Platinum scale.	Total.	Loss on igni- tion.	Fixed.		Albuminoid Ammonia.									
							Total.									
											In solu- tion.					
															In sus- pension.	
Free Ammonia.				Nitrites.	Nitrates.											
Reservoir No. 2, influent	1.21	0.96	4.83	2.26	2.57	.33	.0264	.0238	.0026	.0013	.0001	.0068	0.99	1.2		
Reservoir No. 2, near outlet	0.96	0.77	4.53	2.04	2.49	.32	.0253	.0230	.0023	.0013	.0001	.0088	0.89	1.1		
Reservoir No. 3, influent	0.50	0.46	7.43	2.15	5.28	.46	.0227	.0205	.0022	.0103	.0005	.0409	0.32	2.6		
Reservoir No. 3, near outlet	0.59	0.51	5.42	1.83	3.59	.39	.0243	.0204	.0039	.0034	.0002	.0161	0.57	1.9		
Reservoir No. 4, influent	1.40	1.09	5.20	2.70	2.50	.32	.0333	.0307	.0026	.0011	.0001	.0038	1.29	1.3		
Reservoir No. 4, near outlet, 1 foot below surface	0.84	0.66	4.07	1.81	2.26	.31	.0242	.0224	.0018	.0017	.0001	.0028	0.79	1.1		
Reservoir No. 4, bottom	0.86	0.67	4.30	1.94	2.36	.31	.0223	.0207	.0016	.0022	.0001	.0047	0.78	1.2		
Reservoir No. 5, influent, Walker's brook ..	0.72	0.59	14.71	4.20	10.51	2.01	.0268	.0245	.0023	.0679	.0056	.1544	0.68	5.6		
Reservoir No. 5, near outlet, 1 foot below surface	0.63	0.54	5.70	1.98	3.72	.39	.0259	.0227	.0032	.0101	.0003	.0184	0.60	2.0		
Reservoir No. 5, mid-depth	0.67	0.56	5.72	1.91	3.81	.39	.0250	.0217	.0033	.0101	.0003	.0165	0.61	2.0		
Reservoir No. 5, bottom	0.65	0.55	5.75	2.08	3.67	.38	.0253	.0218	.0035	.0130	.0003	.0192	0.59	2.0		
Reservoir No. 6, influent	1.66	1.26	5.97	3.25	2.72	.45	.0338	.0325	.0013	.0010	.0001	.0036	1.61	1.4		
Reservoir No. 6, near outlet, 1 foot below surface	0.76	0.61	4.18	1.85	2.33	.37	.0221	.0198	.0023	.0019	.0001	.0059	0.75	1.2		
Reservoir No. 6, near outlet, bottom	0.71	0.58	4.06	1.73	2.33	.37	.0188	.0173	.0015	.0020	.0001	.0078	0.73	1.1		
Lake Cochituate	0.31	0.34	5.11	1.73	3.38	.52	.0202	.0172	.0030	.0012	.0001	.0063	0.44	2.1		
Service Pipe, State House	0.65	0.55	4.82	1.84	2.98	.40	.0193	.0177	.0016	.0009	.0001	.0137	0.64	1.6		
Mystic Lake	0.18	0.24	11.58	2.51	9.07	1.44	.0226	.0164	.0062	.0103	.0006	.0601	0.32	4.2		

Lake Cochituate, 1897.

MONTH.	ORGANISMS. ¹					AMORPHOUS. ¹					REMARKS.
	Sur.	Mid.	Bot.	Mean.	Willow Br.	Sur.	Mid.	Bot.	Mean.	Willow Br.	
January.....	451	549	673	558	108	275	296	793	455	156	{ Diatomaceæ, Infusoria, { Cyanophyceæ.
February.....	253	216	343	271	81	191	238	377	269	153	
March.....	231	204	828	421	251	207	214	220	214	193	Infusoria. (Crenothrix.)
April.....	554	381	421	452	194	207	222	283	237	243	{ Infusoria. (Crenothrix.) { Diatomaceæ.
May.....	481	294	292	356	135	134	247	321	234	172	Diatomaceæ, Infusoria.
June.....	1,243	387	534	721	232	182	187	548	306	191	Diatomaceæ, (Crenothrix.)
July.....	324	391	536	417	474	135	219	960	438	141	{ Cyanophyceæ, { Diatomaceæ, (Crenothrix.)
August.....	468	323	606	466	798	147	245	1,261	551	209	Cyanophyceæ, (Crenothrix.)
September.....	642	270	432	448	934	189	216	636	347	212	Cyanophyceæ, (Crenothrix.)
October.....	860	292	1,949	1,034	2,097	259	246	1,680	728	219	{ Diatomaceæ, Cyanophyceæ, { Infusoria, (Crenothrix.)
November.....	2,248	1,720	1,689	1,886	3,690	177	196	1,104	492	226	{ Diatomaceæ, Cyanophyceæ, { Infusoria, (Crenothrix.)
December.....	1,421	1,301	1,312	1,345	577	204	231	285	240	165	{ Diatomaceæ, Infusoria, { Cyanophyceæ.
Mean.....	765	527	801	698	797	192	230	706	376	190	

¹ Standard units per c.c.

Reservoir 2, 1897.

MONTH.	ORGANISMS. ¹				AMORPHOUS. ¹				REMARKS.	
	Sur.	Mid.	Bot.	Mean.	Influent.	Sur.	Mid.	Bot.		Mean.	Influent.
January.....	28	19	31	26	50	136	122	136	131	194
February.....	16	15	11	14	23	121	115	153	130	209
March.....	31	27	17	25	17	175	162	188	175	155
April.....	85	106	61	84	80	232	178	185	198	141
May.....	454	40	108	201	161	278	272	309	286	174
June.....	73	72	80	75	94	179	234	210	208	259
July.....	159	142	91	131	146	225	251	233	236	154
August.....	640	626	313	526	157	218	230	244	231	172
September.....	379	333	213	308	209	243	226	267	245	186
October.....	165	185	158	169	119	286	347	363	332	186
November.....	93	71	81	82	93	168	162	162	164	126
December.....	40	34	54	43	62	139	133	123	132	180
Mean.....	180	140	102	140	101	200	203	214	206	178
			</							

¹ Standard units per c.c.

Infusoria. Diatomaceæ.

Chlorophyceæ.

Cyanophyceæ. Infusoria. Chloro-
phyceæ.

Diatomaceæ. Cyanophyceæ. Chlo-
rophyceæ.

Diatomaceæ.

Reservoir 3, 1897.

MONTH.	ORGANISMS. ¹				AMORPHOUS. ¹				REMARKS.
	Sur.	Mid.	Bot.	Mean.	Sur.	Mid.	Bot.	Mean.	
January	202	222	214	213	167	165	155	162	Diatomaceæ. Infusoria.
February	218	63	339	207	183	206	248	212	Infusoria.
March	160	56	89	102	286	228	205	240	Infusoria.
April	354	388	282	341	391	367	399	386	Infusoria. Diatomaceæ.
May	1,812	1,819	2,353	1,995	180	230	287	232	Infusoria. Diatomaceæ.
June	3,183	2,906	2,850	2,980	177	198	205	193	Infusoria. Diatomaceæ. Cyanophyceæ.
July	362	634	754	583	161	167	227	185	{ Diatomaceæ. Infusoria. Cyanophyceæ. Chlorophyceæ.
August	900	725	562	729	237	262	311	270	{ Chlorophyceæ. Diatomaceæ. Infusoria. Cyanophyceæ. Infusoria. Chlorophyceæ.
September	1,008	786	646	813	238	260	255	251	{ Chlorophyceæ. Infusoria. Chlorophyceæ. Diatomaceæ.
October	1,375	793	745	971	374	381	391	382	Cyanophyceæ. Diatomaceæ. Infusoria.
November	790	578	686	684	253	272	254	260	Diatomaceæ. Cyanophyceæ. Infusoria.
December	786	656	633	692	192	164	201	196	Diatomaceæ. Infusoria.
Mean	929	802	846	859	237	244	262	247	

¹ Standard units per c.c.

Reservoir 4, 1897.

MONTH.	ORGANISMS. ¹					AMORPHOUS. ¹					REMARKS.
	Sur.	Mid.	Bot.	Mean.	Influent.	Sur.	Mid.	Bot.	Mean.	Influent.	
January	89	60	180	110	12	113	164	401	226	94	Diatomaceæ.
February	46	26	19	30	20	151	197	238	195	226	
March	46	29	11	29	26	144	191	175	170	123	
April	284	144	49	159	42	196	206	212	205	160	Infusoria.
May	158	45	39	81	114	170	203	211	195	364	
June	103	88	61	84	26	142	161	161	155	194	Diatomaceæ.
July	88	122	31	80	63	108	122	126	119	110	
August	155	88	51	98	31	138	160	165	154	118	Infusoria. Chlorophyceæ.
September	166	120	56	114	65	146	164	179	163	122	Chlorophyceæ.
October	105	69	81	85	46	158	166	173	166	174	
November	51	86	55	64	46	195	211	217	208	102	
December	109	182	147	146	46	119	133	126	126	107	Infusoria.
Mean.....	117	88	65	90	36	148	173	199	174	158	

¹ Standard units per c.c.

Reservoir 5, 1897.

MONTH.	ORGANISMS. ¹				AMORPHOUS. ¹				REMARKS.
	Sur.	Mid.	Bot.	Mean.	Sur.	Mid.	Bot.	Mean.	
January.....									
February.....	19	12	19	17	720	740	990	817	
March.....	9	20	18	16	2,076	2,092	1,858	2,009	
April.....	167	177	26	123	620	409	723	584	Infusoria. Chlorophyceæ.
May.....	226	197	155	193	401	212	418	344	Diatomaceæ. Infusoria. Chlorophyceæ.
June.....	43	33	29	35	119	140	189	149	
July.....	73	23	27	41	134	194	191	173	
August.....	417	110	43	190	189	190	255	211	Cyanophyceæ.
September.....	258	215	96	190	196	209	342	249	Cyanophyceæ. Chlorophyceæ.
October.....	500	430	365	432	307	339	365	337	Diatomaceæ. Cyanophyceæ.
November.....	190	177	186	184	184	213	330	242	Diatomaceæ. Cyanophyceæ.
December.....	205	244	201	217	188	202	217	202	Diatomaceæ. Cyanophyceæ.
Mean.....	192	149	106	149	467	449	534	483	

¹ Standard units per c.c.

Reservoir 6, 1897.

MONTH.	ORGANISMS. ¹					AMORPHOUS. ¹					REMARKS.
	Sur.	Mid.	Bot.	Mean.	Influent.	Sur.	Mid.	Bot.	Mean.	Influent.	
January.....	114	126	64	101	16	157	174	168	166	74	Infusoria.
February.....	49	26	73	49	14	146	162	202	170	135	
March.....	54	76	39	59	48	106	192	166	155	143	Infusoria.
April.....	283	164	162	203	79	207	217	233	219	138	Infusoria.
May.....	157	83	94	111	133	176	219	254	216	241	Infusoria.
June.....	324	97	76	166	45	148	166	178	164	171	Infusoria. Diatomaceæ.
July.....	312	91	48	150	51	107	124	147	126	125	Diatomaceæ.
August.....	2,645	708	417	1,257	25	163	183	180	175	143	{ Cyanophyceæ. Infusoria.
September.....	2,174	1,326	725	1,408	30	180	189	193	187	116	{ Cyanophyceæ. Infusoria.
October.....	2,733	1,592	1,959	2,095	40	222	224	252	233	151	{ Cyanophyceæ. Chlorophyceæ.
November.....	554	607	435	532	22	186	203	213	201	135	{ Diatomaceæ.
December.....	192	431	275	299	21	152	165	151	156	81	Cyanophyceæ. Diatomaceæ.
Mean.....	799	444	364	536	44	163	185	195	181	138	Diatomaceæ. Infusoria.

¹Standard units per c.c.

Reservoir 8, 1897.

MONTH.	ORGANISMS. ¹			AMORPHOUS. ¹			REMARKS.
	At Dam.	Shallow.	Upper Pond.	At Dam.	Shallow.	Upper Pond.	
January.....	.....	.....	.....	.....	.....	.....	
February.....	234	1,012	97	143	170	101	Infusoria.
March.....	375	508	83	235	207	162	Infusoria.
April.....	619	528	193	516	243	205	Infusoria. Diatomaceae.
May.....	280	497	127	140	197	190	Infusoria. Chlorophyceae. Diatomaceae.
June.....	302	77	136	158	155	162	Cyanophyceae.
July.....	50	51	91	148	113	182	
August.....	207	77	747	182	146	238	Infusoria.
September.....	693	498	618	182	151	234	Infusoria. Cyanophyceae. Chlorophyceae. Diatomaceae.
October.....	1,494	605	311	270	192	294	Infusoria. Cyanophyceae. Diatomaceae. Chlorophyceae.
November.....	234	176	250	218	238	193	Diatomaceae. Infusoria.
December.....	143	66	.....	165	128	.....	Diatomaceae.
Mean.....	386	341	241	196	162	178	

¹ Standard units per c.c.

Gate-Houses and Tap, 1897.

MONTH.	CHESTNUT-HILL RESERVOIR.						BROOKLINE-RESERVOIR GATE-HOUSE.		TAP IN BOSTON. PARK SQUARE.	
	Organisms. ¹			Amorphous. ¹			Organisms. ¹	Amorphous. ¹	Organisms. ¹	Amorphous. ¹
	Sudbury.	Cochituate.	Effluent.	Sudbury.	Cochituate.	Effluent.				
January.....	132	448	244	174	259	181	257	171	219	127
February.....	44	178	90	209	200	174	71	168	62	124
March.....	159	216	173	160	206	202	119	151	139	136
April.....	143	391	204	239	209	165	235	187	259	151
May.....	282	510	166	458	166	178	152	174	154	281
June.....	65	1,146	808	381	179	208	1,209	219	539	199
July.....	144	269	361	334	176	193	560	195	273	220
August.....	418	483	546	305	167	221	433	211	419	215
September.....	437	532	492	247	155	200	417	180	557	196
October.....	439	905	433	283	257	250	529	240	532	190
November.....	174	1,848	402	204	234	165	566	175	584	152
December.....	163	1,248	475	169	206	151	571	159	478	138
Mean.....	209	681	366	265	201	191	423	186	351	177

¹ Standard units per c.c.

Temperature (Fahrenheit), 1897.

MONTH.	LAKE COCHITUATE.				BASIN 2.				BASIN 3.				BASIN 4.				BASIN 5.				BASIN 6.					BASIN 8.				
	Sur.	Mid.	Bot.	Mean.	Sur.	Mid.	Bot.	Mean.	Sur.	Mid.	Bot.	Mean.	Influent.	Sur.	Mid.	Bot.	Mean.	Sur.	Mid.	Bot.	Mean.	Influent.	At Dam.	Shallow.	Upper Pond.					
Jan.....	35.6	37.8	39.5	37.6	33.1	35.3	36.8	35.1	32.7	33.2	35.2	37.3	35.2	36.8	37.1	37.8	37.2	33.3	.....	.....	.....	.....	35.5	38.0	38.5	37.3	32.3			
Feb.....	.....	.....	.....	.....	33.0	34.2	36.2	34.5	32.5	33.1	34.6	36.9	34.9	33.4	37.0	38.9	36.4	32.5	.....	.....	.....	.....	34.0	36.5	38.3	36.3	32.5	36.5	33.7	35.0
March...	.....	.....	.....	.....	35.5	36.3	38.1	36.6	35.9	35.6	36.5	38.1	36.7	35.7	37.5	39.1	37.4	36.8	32.0	33.7	35.9	33.3	35.2	37.2	38.6	37.0	35.3	39.3	35.5	38.0
April	49.2	44.6	43.5	45.8	48.4	48.0	46.9	47.8	49.0	48.5	47.0	46.0	47.2	46.5	46.5	46.1	46.4	46.3	48.0	47.5	45.8	47.1	47.3	46.6	45.6	46.5	46.7	51.8	51.6	50.0
May	60.3	47.7	45.1	51.0	59.5	58.0	56.4	58.0	59.0	59.7	58.0	56.7	58.1	59.1	54.6	49.8	54.5	59.8	59.7	55.4	50.2	55.1	58.8	52.2	48.8	53.3	59.0	61.1	63.6	61.0
June.....	66.0	47.8	44.8	52.9	66.5	65.3	64.1	65.3	65.6	65.3	64.8	63.8	64.6	65.2	59.6	49.8	58.2	62.0	65.1	61.9	55.9	61.0	64.8	56.6	49.5	57.0	59.0	68.6	67.0	67.3
July	77.2	47.5	44.2	56.3	77.5	75.6	73.8	75.6	74.4	77.2	75.4	72.9	75.2	74.5	62.0	48.8	61.8	72.3	76.6	66.2	57.9	67.0	76.9	57.5	50.2	61.5	75.3	79.8	79.6	77.5
August ..	71.4	47.5	43.4	54.1	73.5	72.0	70.5	72.0	72.2	72.7	71.4	70.2	71.4	69.4	62.4	48.5	60.1	67.1	73.5	70.1	63.8	69.1	67.5	53.9	46.4	55.9	64.5	75.5	75.1	73.8
Sept.	64.6	45.7	41.1	50.5	65.4	65.1	64.5	65.0	64.9	65.0	64.7	64.2	64.6	59.5	57.8	45.4	54.2	57.9	66.7	66.3	64.5	65.8	60.2	54.7	42.7	52.5	55.3	67.2	66.8	66.7
Oct.	57.3	46.9	42.6	48.9	56.3	55.9	55.6	55.9	55.8	56.3	56.2	56.2	56.2	47.0	46.8	45.8	46.5	50.5	57.8	57.8	57.2	57.6	46.1	45.3	41.3	44.2	48.4	54.8	53.8	56.8
Nov.	44.5	44.7	44.4	44.5	42.4	43.7	44.3	43.5	42.1	42.5	43.8	44.4	43.6	41.5	41.5	41.5	41.5	40.6	44.9	44.8	43.3	44.3	41.7	42.0	40.6	41.4	38.8	42.9	42.4	44.8
Dec.	38.3	38.3	38.7	38.4	34.7	35.3	36.6	35.5	34.6	35.2	35.6	36.7	35.8	38.6	38.8	38.8	38.7	35.0	35.8	36.1	36.6	36.2	37.8	38.0	38.3	38.0	34.0	37.7	34.5	
Mean,	56.4	44.9	42.7	48.0	52.1	52.1	52.0	52.1	51.6	52.0	51.9	51.0	52.0	50.6	48.5	44.2	47.7	49.5	56.0	54.0	50.9	53.7	50.5	46.5	43.2	46.7	48.4	55.9	60.4	57.1

Temperatures (Fahrenheit), 1897.

MONTH.	CHESTNUT-HILL RESERVOIR GATE-HOUSES.			CHESTNUT-HILL RESERVOIR.				BROOK- LINE RES'VR.	TAP.
	Sudbury.	Cochituate.	Effluent.	Surface.	Mid-depth.	Bottom.	Mean.	Gate-House.	Park Sq.
January.....	37.2	37.6	36.3	.....	.....	.....	.....	36.8	40.8
February.....	36.2	38.1	36.0	.....	.....	.....	.....	37.1	37.1
March.....	37.2	38.8	37.1	37.7	37.5	37.5	37.6	38.3	38.2
April.....	48.6	46.4	47.9	48.5	47.2	45.8	47.2	47.8	47.3
May.....	58.3	57.5	57.7	59.4	57.9	52.7	56.7	58.1	57.0
June.....	63.8	64.0	63.9	66.5	65.9	59.0	63.8	64.8	62.7
July.....	73.0	73.7	74.6	77.0	73.3	64.5	71.6	74.8	71.4
August.....	71.5	72.2	71.9	73.4	71.8	65.6	70.3	72.3	69.4
September.....	67.4	68.4	67.6	66.6	67.3	61.2	65.0	68.6	66.6
October.....	57.0	58.3	57.7	57.5	56.9	56.7	57.0	58.1	58.3
November.....	45.5	48.0	46.6	45.5	45.5	45.4	45.5	46.5	48.0
December.....	37.7	39.1	37.1	38.2	38.2	38.2	38.2	37.8	39.2
Mean.....	52.8	53.5	52.9	57.0	56.2	52.7	55.3	53.4	53.0

Color, 1897. (Platinum Standard.)

MONTH.	LAKE COCHITUATE.					BASIN 2.				BASIN 3.			BASIN 4.				BASIN 5.				BASIN 6.				BASIN 8.							
	Sur.	Mid.	Bot.	Mean. ¹	Willow Bridge.	Influent.	Sur.	Mid.	Bot.	Mean.	Sur.	Mid.	Bot.	Mean.	Sur.	Mid.	Bot.	Mean.	Sur.	Mid.	Bot.	Mean.	Influent.	At dam.	Shallow.	Upper Pond.						
January	34.35	.50	.40	.46	.63	.74	.85	.85	.85	.85	.88	.87	.88	.87	.92	.96	.97	.95	1.08	.90	.93	93	.92	1.18	. .	. .	. .					
February	37.32	.40	.46	.63	.72	.69	.69	.69	.69	.69	.69	.72	.81	.81	.78	.82	.90	.89	.87	.95	.83	.83	.83	.83	.84	.86	.89	.86	.95	.59	.77	.45
March.....	38.35	.80	.51	.61	.68	.65	.66	.67	.66	.66	.70	.61	.67	.66	.65	.77	.78	.80	.78	.86	.80	.80	.80	.80	.68	.71	.73	.71	.84	.56	.47	.38
April.....	41.41	.41	.41	.60	.99	.81	.81	.82	.81	.81	.91	.61	.60	.60	.60	.84	.84	.84	.84	1.09	.72	.71	.71	.71	.72	.73	.73	.73	1.33	.54	.54	.45
May	31.31	.37	.33	.60	1.22	.85	.84	.84	.84	.84	1.07	.51	.52	.52	.52	.78	.77	.77	.77	1.38	.57	.57	.58	.57	.63	.63	.63	.63	1.82	.58	.55	.60
June	30.30	.76	.45	.61	1.01	1.02	1.03	1.04	1.03	1.03	1.17	.55	.56	.58	.56	.81	.81	.75	.79	1.53	.58	.57	.62	.59	.70	.65	.62	.66	1.87	.63	.54	.59
July	30.33	1.67	.77	.56	1.25	.91	.92	.92	.92	.92	1.22	.44	.40	.65	.53	.73	.73	.69	.72	1.12	.67	.68	.77	.71	.67	.62	.57	.62	1.69	.56	.60	.56
August	26.32	1.68	.75	.53	1.59	1.23	1.28	1.33	1.28	1.33	1.64	.49	.51	.60	.53	.66	.66	.66	.66	1.81	.63	.65	.84	.71	.65	.65	.59	.63	1.96	.55	.58	.58
September.....	27.33	1.41	.67	.52	.92	1.07	1.08	1.08	1.08	1.08	.86	.55	.55	.55	.55	.63	.63	.64	.63	.88	.64	.64	.83	.70	.64	.62	.58	.61	1.29	.59	.60	.61
October.....	32.41	2.93	1.22	.51	.69	.79	.79	.81	.80	.81	.81	.55	.55	.56	.55	.63	.63	.65	.64	.95	.61	.62	.64	.62	.65	.66	.72	.68	1.21	.63	.65	.63
November.....	40.42	1.42	.75	.50	.80	.86	.86	.88	.87	.87	.80	.54	.54	.54	.54	.62	.63	.64	.63	1.29	.57	.57	.61	.58	.61	.62	.62	.62	1.38	.72	.70	.60
December	37.38	.39	.38	.56	.63	.85	.85	.85	.85	.85	.87	.50	.51	.50	.50	.65	.65	.65	.65	1.21	.58	.58	.60	.59	.63	.63	.63	.63	1.24	.72	.74	.....
Mean.....	34.35	1.06	.59	.57	.94	.88	.89	.90	.89	.89	.97	.58	.60	.62	.60	.74	.75	.75	.75	1.18	.66	.66	.71	.68	.70	.69	.69	.69	1.40	.61	.61	.55

¹ This does not fairly represent the average color, as the high color of the bottom represents but a very small proportion of the water of the lake.

Color, 1897. (Platinum Standard.)

MONTH.	CHESTNUT-HILL RESERVOIR GATE-HOUSES.			CHESTNUT-HILL RESERVOIR.				BR'K- LINE RES.	TAP.
	Sudbury.	Cochituate.	Effluent.	Surface.	Mid-depth.	Bottom.	Mean.	Gate-House.	Park Sq.
January	.87	.34	.70	.....	.....	.....	.....	.65	.69
February	.67	.36	.63	.....	.....	.....	.....	.57	.62
March	.62	.37	.53	.55	.55	.55	.55	.49	.54
April	.73	.36	.54	.54	.54	.54	.54	.53	.54
May	.75	.31	.54	.53	.54	.54	.54	.53	.54
June	.95	.30	.61	.61	.61	.58	.60	.62	.61
July	.82	.30	.65	.64	.66	.62	.64	.63	.64
August.....	.96	.25	.58	.58	.60	.54	.57	.57	.59
September	.82	.25	.61	.61	.61	.69	.64	.59	.60
October.....	.66	.30	.61	.57	.58	.59	.58	.52	.57
November	.81	.35	.53	.53	.54	.54	.54	.52	.53
December	.79	.35	.63	.63	.63	.64	.63	.62	.63
Mean.....	.79	.32	.60	.58	.59	.58	.58	.57	.59

Bacteria, 1897.

MONTH.	CHESTNUT-HILL RESERVOIR GATE-HOUSES.			CHESTNUT-HILL RESERVOIR.			BR'K. LINE RES.	TAP.
	Sudbury.	Cochituate.	Effluent.	Surface.	Mid-depth.	Bottom.	Gate-House.	Park Sq.
January	77	52	42	.....	.....	.....	57	17
February	669	283	268	.....	.....	.....	262	182
March.....	467	160	141	114	164	168	173	123
April.....	186	77	134	110	131	133	153	102
May.....	81	113	65	50	59	74	92	64
June.....	108	122	46	48	47	80	70	44
July	80	159	72	50	60	70	68	132
August.....	196	133	97	58	272	89	65	115
September.....	73	85	70	61	50	73	58	83
October	144	311	91	83	93	83	98	98
November.....	458	722	162	114	133	138	169	101
December.....	291	85	160	64	141	112	179	197
Mean.....	236	192	112	75	115	102	120	105

Maintenance, Western Division, February 1, 1897, to January 31, 1898.

DRAFTS.	Western Division.	Basins.	Subbury Aqueduct.	Cochituate Aqueduct.	Lake Cochituate.	Pegan Filters.	Chestnut-Hill Reservoir.	Chestnut-Hill Driveway.	Brookline Reservoir.	Fisher-Hill Reservoir.	Biological Department.	Inspection Department.	High-Service Pumping Station.	Totals.
February 1, 1897.....	\$442 91	\$1,113 09	\$149 40	\$40 00	\$8 19	\$65 35	\$60 94	\$170 91	\$10 40	\$10 40	\$115 81	\$299 64	\$1,518 10	\$4,004 64
March 1, "	1,052 93	3,081 24	664 01	201 84	180 28	266 94	804 55	718 62	211 50	157 50	351 02	387 15	3,405 17	11,482 75
April 1, "	1,307 38	857 95	684 06	173 32	162 71	292 59	856 33	812 74	148 45	248 95	384 20	522 34	1,786 94	8,277 96
May 1, "	1,442 00	1,261 88	731 45	401 70	280 25	331 58	1,080 01	535 93	114 35	227 85	344 75	705 80	2,391 63	9,849 18
June 1, "	1,108 90	854 63	514 85	278 75	173 63	338 30	1,417 79	1,003 15	115 50	119 25	315 59	592 94	4,472 45	11,306 03
July 1, "	1,165 50	1,950 89	589 60	270 19	290 26	297 91	999 62	663 31	138 67	71 75	293 80	597 97	4,639 35	11,998 82
August 1, "	1,149 97	1,029 58	502 86	305 21	240 07	294 69	1,485 18	990 65	396 50	407 25	411 54	505 88	2,118 13	9,767 51
September 1, "	1,074 57	891 85	604 03	181 68	251 88	246 01	916 91	1,024 99	165 75	103 25	311 90	544 19	4,385 07	10,702 17
October 1, "	1,058 71	929 63	569 78	144 00	279 68	254 22	1,091 76	875 67	207 50	97 50	265 62	539 64	2,090 46	8,404 17
November 1, "	1,108 74	1,538 03	729 85	187 08	202 06	393 55	1,224 68	794 78	303 22	265 75	561 26	546 83	2,673 34	10,549 17
December 1, "	1,010 55	1,843 41	491 33	362 72	257 15	309 01	1,222 24	738 17	179 08	133 25	320 05	574 97	2,636 70	10,078 63
January 1 and 31, 1898...	1,320 10	1,749 43	1,105 36	314 16	293 67	312 81	1,508 31	922 27	244 65	191 25	368 10	838 29	3,305 73	12,774 13
Total for year.....	\$13,331 76	\$17,151 61	\$7,336 58	\$2,806 65	\$2,020 13	\$3,402 96	\$12,968 32	\$9,251 19	\$2,105 57	\$2,083 95	\$3,993 73	\$6,655 64	\$35,423 07	\$119,195 16

Table of Rainfall at Chestnut-Hill Reservoir for Year ending
December 31, 1897.

DATE.	Inches.	Snow or Rain.	Duration.	DATE.	Inches.	Snow or Rain.	Duration.
Jan. 4	1.26	Rain.	6.00 p.m. to	April 5	0.25	Rain.	1.30 a.m. to 4.00 p.m.
" 5			3.30 p.m.	" 7	0.61	"	4.00 p.m. to
" 17	0.32	"	4.30 p.m. to	" 8			1.00 a.m.
" 18			7.00 a.m.	" 8	1.69	"	6.00 p.m. to
" 20	0.70	Snow and rain.	7.00 p.m. to	" 9			11.30 p.m.
" 21			3.15 p.m.	" 15	0.26	"	1.30 a.m. to 12.30 p.m.
" 22	0.05	Snow.	8.00 p.m. to 11.30 p.m.	" 15	0.10	"	4.15 p.m. to 5.00 p.m.
" 27	1.76	"	7.00 p.m. to	" 17	0.18	"	11.00 a.m. to 3.30 p.m.
" 28			7.00 p.m.	" 26	0.04	"	4.00 a.m. to 6.00 a.m.
Total.	4.09			" 27	0.10	"	3.45 p.m. to 9.00 p.m.
Feb. 6	0.59	Rain.	8.30 p.m. to	Total.	3.23		
" 7			5.30 p.m.	May 2	1.00	Rain.	1.00 a.m. to
" 8	0.02	Snow.	9.00 p.m. to 11.00 p.m.	" 3			10.00 a.m.
" 12	1.26	"	1.00 a.m. to	" 3	0.44	"	10.00 p.m. to
" 13			1.30 a.m.	" 4			4.00 a.m.
" 16	0.02	Rain and snow.	3.30 a.m. to 9.30 a.m.	" 10	0.64	"	4.35 p.m. to 10.00 p.m.
" 21	0.13	Snow.	12.40 a.m. to 5.00 a.m.	" 12	0.20	"	5.30 a.m. to 2.00 p.m.
" 22	0.77	Rain and snow.	8.00 p.m. to	" 13	0.15	"	4.00 a.m. to 9.00 a.m.
" 23			10.30 a.m.	" 13	0.25	"	3.40 p.m. to 10.00 p.m.
Total.	2.79			" 16	0.08	"	5.00 a.m. to 7.00 a.m.
Mar. 1	0.07	Snow.	4.15 p.m. to 11.30 p.m.	" 21	0.17	"	5.30 p.m. to 8.30 p.m.
" 2	0.18	Rain.	9.00 p.m. to	" 25	0.93	"	12.05 a.m. to 5.30 a.m.
" 3			5.00 p.m.	" 29	0.03	"	3.00 a.m. to 4.00 a.m.
" 5	0.30	Snow and rain.	12.30 p.m. to 11.00 p.m.	" 30	0.51	"	7.45 p.m. to
" 10	0.05	Rain.	8.00 a.m. to 11.00 a.m.	" 31			3.00 p.m.
" 12	0.15	"	1.45 p.m. to 7.30 p.m.	Total.	4.40		
" 14	0.36	Snow and rain.	9.50 a.m. to 5.30 p.m.	June 4	0.41	Rain.	3.45 p.m. to
" 19	0.90	Rain.	11.30 p.m.	" 5			10.30 a.m.
" 20			to	" 9	2.14	"	4.00 a.m. to
" 21			8.30 a.m.	" 10			6.00 p.m.
" 24	1.07	"	1.00 a.m. to 7.00 p.m.	" 13	0.31	"	2.00 p.m. to 7.00 p.m.
Total.	3.08			" 15	0.32	"	2.45 p.m. to 4.00 p.m.
				" 20	0.27	"	4.30 a.m. to 8.30 a.m.

Table of Rainfall at Chestnut-Hill Reservoir. — *Continued.*

DATE.	Inches.	Snow or Rain.	Duration.	DATE.	Inches.	Snow or Rain.	Duration.
June 20	0.05	Rain.	10.30 a.m. to 4.30 p.m.	Oct. 12	0.41	Rain.	1.15 p.m. to 5.15 p.m.
" 25	0.10	"	9.20 a.m. to 10.00 a.m.	" 21	0.12	"	6.15 a.m. to 4.30 p.m.
" 30	0.93	"	2.30 a.m. to 10.15 a.m.	Total.	0.53		
Total.	4.53			Nov. 1	2.22	Rain.	1.20 p.m. to.
July 1	0.05	Rain.	7.15 p.m. to 7.30 p.m.	" 2			11.00 p.m.
" 11	0.05	"	6.00 a.m. to 11.30 a.m.	" 5	0.06	"	10.00 p.m. to 10.30 p.m.
" 13	0.38	"	12.15 a.m. to 7.00 a.m.	" 8	0.72	"	5.00 p.m. to
" 13	0.28	"	5.00 p.m. to	" 9			6.00 p.m.
" 14			9.30 a.m.	" 11	2.04	Rain and snow.	5.00 p.m. to
" 22	1.28	"	4.20 a.m. to 7.00 p.m.	" 12			12.45 p.m.
" 24	0.58	"	2.20 p.m. to 10.00 p.m.	" 15	0.05	Rain.	6.45 p.m. to 10.00 p.m.
" 25	0.02	"	6.30 p.m. to 7.30 p.m.	" 16	0.31	"	9.30 p.m. to
" 28	1.74	"	11.00 p.m. to	" 17			3.00 a.m.
" 29			10.10 a.m.	" 19	0.25	Snow.	10.45 a.m. to
Total.	4.38			" 20			4.30 p.m.
Aug. 4	0.38	Rain.	4.40 p.m. to 5.05 p.m.	" 22	0.32	"	10.00 p.m. to
" 4	0.73	"	8.30 p.m. to	" 23			7.00 a.m.
" 5			11.00 a.m.	" 25	0.04	Rain.	10.00 p.m. to 10.30 p.m.
" 11	0.12	"	2.00 p.m. to 4.45 p.m.	" 27	0.57	"	3.30 a.m. to 9.15 a.m.
" 11	0.06	"	10.00 p.m. to	" 29	0.16	"	2.15 p.m. to 6.45 p.m.
" 12			11.00 a.m.	Total.	6.74		
" 15	0.36	"	3.45 p.m. to 5.00 p.m.	Dec. 3	0.05	Snow.	12.45 p.m. to
" 15			10.30 p.m. to	" 4			5.30 a.m.
" 16	0.14	"	7.30 a.m.	" 4	0.37	Rain.	5.00 p.m. to
" 16			12.20 p.m. to 2.00 p.m.	" 5			9.45 a.m.
" 18	1.00	"	7.00 p.m. to 10.30 p.m.	" 7	0.13	Snow.	11.45 a.m. to
" 22	0.62	"	5.15 p.m. to 9.15 p.m.	" 8			5.30 a.m.
" 24	1.27	"	5.00 a.m. to 3.30 p.m.	" 12	0.42	Rain.	8.30 a.m. to 6.00 p.m.
Total.	4.68			" 14	2.48	"	11.30 a.m. to
Sept. 2	0.67	Rain.	4.00 a.m. to 4.00 p.m.	" 15			2.30 p.m.
" 11	0.15	"	2.00 p.m. to 2.30 p.m.	" 17	0.03	"	8.30 p.m. to 11.00 p.m.
" 13	0.34	"	3.00 p.m. to 5.00 p.m.	" 20	0.20	Snow.	7.15 p.m. to
" 16	0.33	"	7.50 p.m. to 10.00 p.m.	" 21			10.00 a.m.
" 20	0.98	"	3.20 p.m. to 8.00 p.m.	" 26	0.21	"	11.20 a.m. to 9.00 p.m.
" 23	0.67	"	5.00 p.m. to	" 29	0.05	"	9.00 p.m. to 11.30 p.m.
" 24			9.30 a.m.	" 31	0.56	Snow and rain.	12.00 noon to 11.45 p.m.
" 26	0.08	"	7.30 p.m. to 8.30 p.m.	Total.	4.50		
Total.	3.22						

NOTE.—Total Rainfall for the Year, 46.17 inches.

APPENDIX C.

REPORT OF THE ENGINEER.

ENGINEERING DEPARTMENT,
CITY HALL, February 1, 1898.

HON. JOHN R. MURPHY,
Water Commissioner:

SIR: I hereby submit the following report of the work done and records kept, during the past year:

SOURCES OF SUPPLY.

The rainfall and quantities collected on the several watersheds were as follows:

	Sudbury.	Cochituate.	Mystic.
Rainfall, in inches	46.190	44.790	44.350
Rainfall collected, in inches	20.815	17.052	17.636
Daily average yield of water- shed, in gallons }	74,528,800	15,321,100	22,566,600

Reservoir No. 1.

Grades, H.W., 160.79; Tops of Flash-boards, 159.29 and 158.41; Crest of Dam 157.54; Area, Water Surface, 143 acres; Greatest Depth, 15 ft.; Contents, below 160.79, 365,560,000 gals.; Below 159.29, 288,400,000 gals.

On January 1, 1897, the surface of this reservoir was at grade 156.37 or 1.17 feet below the crest of the dam; it remained at about this point until March 1, when the reservoir began to fill, and on March 7, water was wasting over the dam, and so continued until April 2, when the flash-boards were placed in position.

From April 8 to 21, from May 3 to 5, May 15 to 18, May 30 to June 28, July 1 to 7, and from July 13 to August 3, water wasted over the flash-boards.

On August 16 the flash-boards were removed from the dam.

The water reached its lowest point on September 17, being at grade 145.90. On January 1, 1898, the water surface was at grade 157.28. Excepting July 30 and August 3 and 4, no water was drawn from this reservoir after May 27.

Reservoir No. 2.

Grades, H.W., 167.87; Tops of Flash-boards, 167.12 and 166.49; Crest of Dam, 165.87; Area, Water Surface, 134 acres; Greatest depth, 17 ft.; Contents below 167.87, 562,580,000 gals.; Below 167.12, 529,860,000 gals.

On January 1, 1897, the water surface was at grade 162.63, or 3.24 feet below the crest of the dam. On March 6 the flash-boards were placed on the dam, and on March 7 water began to waste over the flash-boards. Waste continued until May 29, from June 11 to 21 and from July 30 to August 9.

On October 30 the flash-boards were removed from the dam.

On December 1, one set of flash-boards was placed on the dam and removed on December 29. On December 16, water wasted over flash-boards and after flash-boards were removed from the dam wasted over dam up to January 1, 1898. This reservoir has been drawn upon for the supply of the city practically the entire year. Water was run into reservoir from Reservoirs Nos. 4 and 6 during July; from Reservoir No. 4 during September and October, and from Reservoirs Nos. 4 and 6 during a very few days in November and December.

Reservoir No. 3.

Grades, H.W., 176.74; Crest of Dam (no Flash-boards), 175.24. Area at 177.00, 253 acres; Contents below 176.74, 1,203,180,000 gals. Area at 175.24, 248 acres; Contents below 175.24, 1,081,500,000 gals. Greatest depth, 21 ft.

On January 1, 1897, the water surface of this reservoir was at grade 174.82 or 42 feet below the crest of the dam.

On January 6 waste began and continued until January 18, again on March 14 water wasted and continued to waste until August 11.

From August 11, the water surface fell slowly, and on September 23 reached its lowest point, being at grade 168.80, or 6.44 feet below the crest of the dam. Filling since that date, the water surface on January 1, 1898, was at grade 174.78.

Since July 13, excepting November 6 to 10, November 12 to December 2 and from December 9 to 27, this reservoir was drawn upon for the supply of the city.

Reservoir No. 4.

Grades, H.W., 215.21; Tops of Flash-boards, 215.21+ and 214.89; Crest of Dam, 214.21. Area, Water Surface, 167 acres; Greatest depth, 49 feet; Contents below 215.21, 1,416,350,000 gals.

On January 1, 1897, the water surface of this reservoir was at grade 195.11 or 19.12 feet below the crest of the dam, filling gradually, the flash-boards were placed on the dam on April 2.

On April 10 waste began over the flash-boards and continued until July 2. On July 13 the flash-boards were removed from the dam. The reservoir was drawn upon for the supply of the city on July 1, and on November 3 the water surface had fallen to grade 201.13 or 13.10 feet below the crest of the dam. Since that time the reservoir has been gradually filling, and on January 1, 1898, the water surface was at grade 210.08.

Reservoir No. 5.

This reservoir under construction by the City of Boston was taken by the Metropolitan Water Board on January 4, 1897.

Reservoir No. 6.

Grades, H.W., 295.00; Top of Flash-boards, 295.00; Crest of Dam, 294.00. Area, 185 acres; Contents, 1,520,900,000 gals.

On January 1, 1897, the water surface was at grade 266.41 or 27.59 feet below the crest of the dam. The first set of flash-boards was placed on the dam on May 16, and the second set on May 19. On June 8, water began to waste over the flash-boards and continued until July 4.

On December 15 the flash-boards were removed from this dam.

On December 17 water began to waste over the crest of the dam, and continued during the remainder of the month.

On January 1, 1898, the water surface was at grade 294.20.

Whitehall Pond.

Elevation, H.W., 327.91; Bottom of Gates, 317.78. Area at 327.91, 601 acres; Contents between 327.91 and 317.78, 1,256,900,000 gals. H.W. of Temporary Dam, 329.91; Contents at 329.91, 1,654,800,000 gals.

On January 1, 1897, the water surface of the pond was at grade 324.77 or 3.14 feet below old high water. Filling gradually, the water surface reached grade 328.76 on June 15, and remained above grade 328.00 until September 22. On January 1, 1898, the water surface was at grade 326.48.

Water was drawn from this pond for the supply of the city, from February 2 to March 4, and from July 8 to 24.

Preparations were made early in the season for a drought, should that contingency arise. A new dam at Whitehall pond was built, raising the water line 2 feet, and in Reservoir No. 5, seized by the Metropolitan Water Board, 1,700,000 gallons were stored as a reserve. This was rendered possible by the completion of the stripping contracts in the lower portions of the reservoir. The water was raised to within 16 feet of the top of the spillway without interfering with the completion of the remaining sections under contract.

Farm Pond.

Grades, H.W., 149.25; Low Water, 146.00. Area at 149.25, 159 acres; Contents between 149.25 and 146.00, 167,520,000 gals.

No water has been drawn from this pond for the supply of the city during the year 1897. On January 1, 1897, the surface of the pond was at grade 148.78 or .47 feet below high water mark; rising slowly, a grade 149.50 was reached on April 16.

During May and June it remained at about this point and starting to fall very slowly in July was at grade 147.88 on October 24. On January 1, 1898, the water surface was at grade 148.75. The Framingham Water Company has drawn 117,600,000 gallons from the pond during the year.

Lake Cochituate.

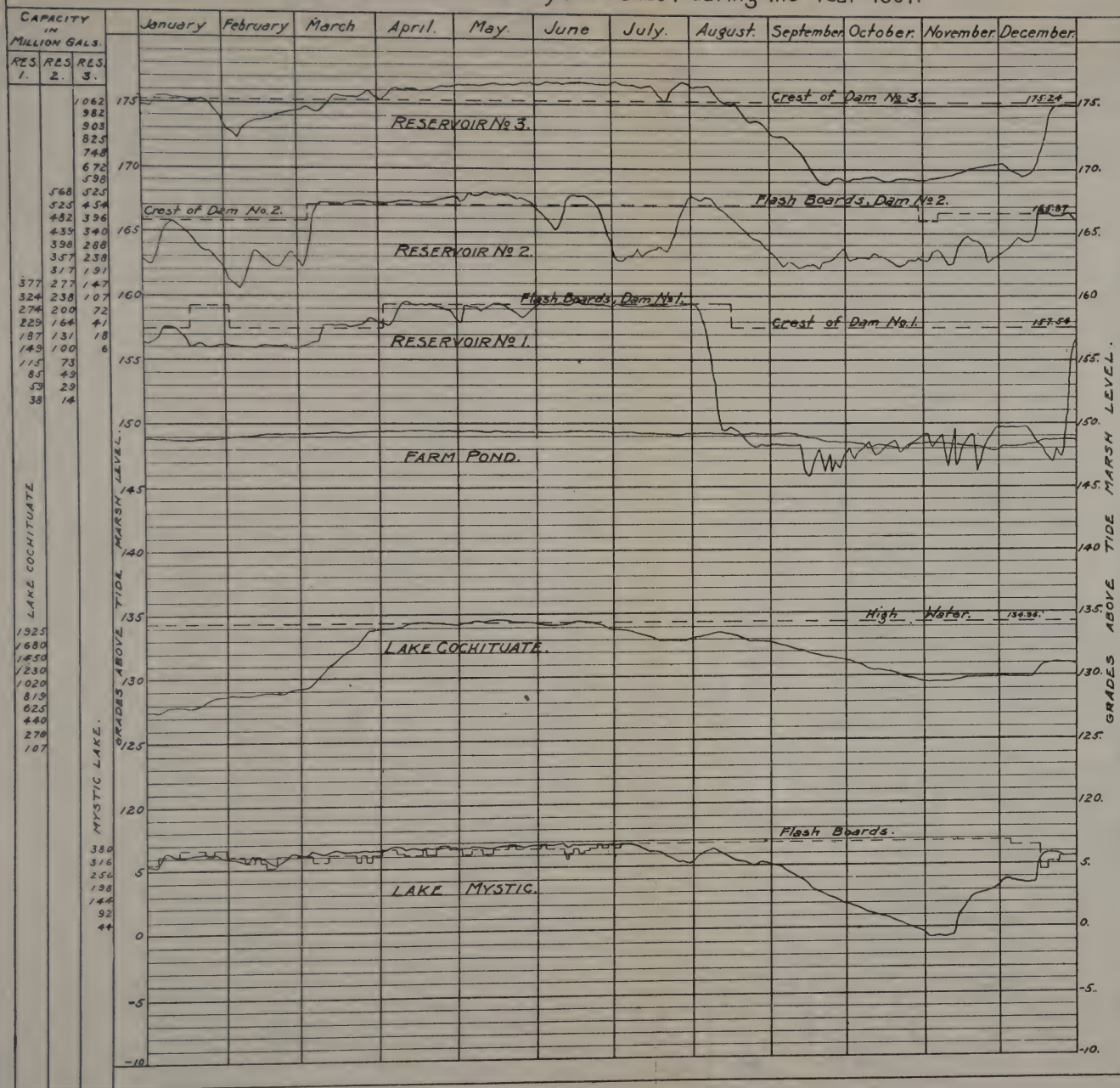
Grades, H.W., 134.36; Invert Aqueduct, 121.03; Top of Aqueduct, 127.36. Area, Water Surface at 134.36, about 776 acres; Contents between 134.36 and 127.36 1,515,180,000 gals.; Between 134.36 and 125.00, 1,908,200,000 gals.; Approximate Contents between 134.36 and 121.03, 2,447,000,000 gals.; Between 134.36 and 117.03, 2,907,000,000 gals.

On January 1, 1897, the surface of the lake was at grade 127.43 or 6.93 feet below high water mark; filling gradually, high water mark was reached on April 13. It remained at about this point until the latter part of June when the water surface fell, reaching its lowest point, grade 129.43, on November 1.

Since that time the lake filled, and on January 1, 1898, it was at grade 130.87. The beds for filtering the water of Pegan brook have been in use almost continuously during the year and 249,965,000 gallons have been pumped upon them. No difficulty has been experienced in their operation during the winter season. Water has been drawn from the different reservoirs as follows:

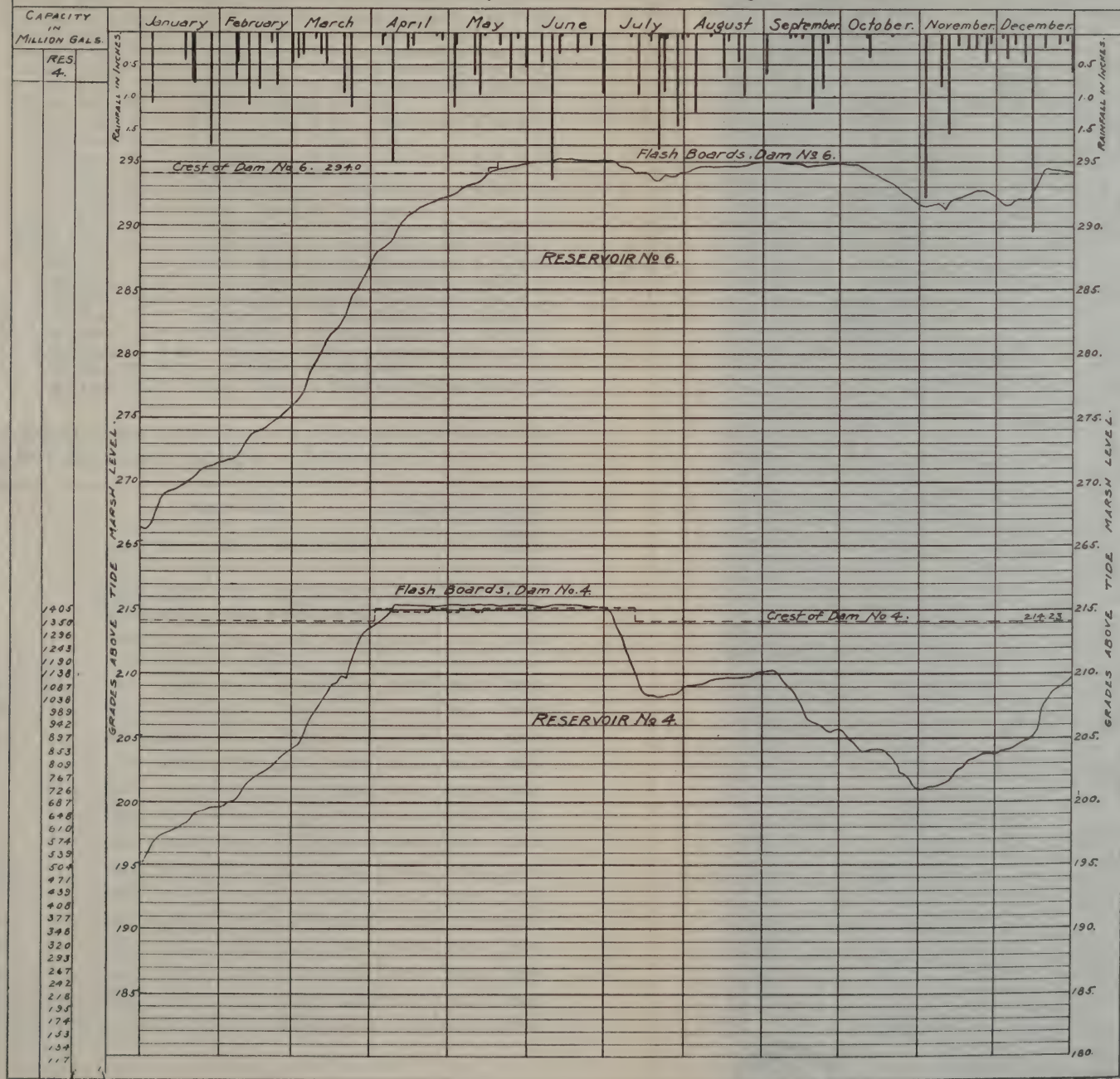
BOSTON WATER WORKS.

Diagram showing the heights of Sudbury River Reservoirs Nos 1, 2, and 3.
Farm Pond, and Cochituate and Mystic Lakes, during the Year 1897.



BOSTON WATER WORKS.

Diagram showing the heights of Sudbury River Reservoirs Nos 4 and 6.,
and the Rainfall on the Sudbury River Watershed during the Year 1897.



From	7 A.M. Jan.	1	to 10 A.M. May	27	from Reservoirs Nos. 1, 2.
"	10 A.M. May	27	" 11 A.M. July	13	from Reservoir No. 2.
"	11 A.M. July	13	" 7 A.M. July	30	from Reservoirs Nos. 2, 3.
"	7 A.M. July	30	" 7 A.M. July	31	from Reservoirs Nos. 1, 3.
"	7 A.M. July	31	" 7 A.M. Aug.	3	from Reservoirs Nos. 2, 3.
"	7 A.M. Aug.	3	" 12 M. Aug.	4	from Reservoirs Nos. 1, 2.
"	12 M. Aug.	4	" 5 P.M. Aug.	29	from Reservoirs Nos. 2, 3.
"	5 P.M. Aug.	29	" 5 P.M. Aug.	30	No flow.
"	5 P.M. Aug.	30	" 7 P.M. Sept.	13	from Reservoirs Nos. 2, 3.
"	7 P.M. Sept.	13	" 1 P.M. Sept.	14	No flow.
"	1 P.M. Sept.	14	" 7 P.M. Sept.	19	from Reservoirs Nos. 2, 3.
"	7 P.M. Sept.	19	" 8 P.M. Sept.	20	No flow.
"	8 P.M. Sept.	20	" 5 A.M. Sept.	27	from Reservoirs Nos. 2, 3.
"	5 A.M. Sept.	27	" 8 A.M. Sept.	28	No flow.
"	8 A.M. Sept.	28	" 3 P.M. Oct.	24	from Reservoirs Nos. 2, 3.
"	3 P.M. Oct.	24	" 11 A.M. Oct.	26	from Reservoir No. 3.
"	11 A.M. Oct.	26	" 7 P.M. Nov.	6	from Reservoirs Nos. 2, 3.
"	7 P.M. Nov.	6	" 11 A.M. Nov.	10	from Reservoir No. 2.
"	11 A.M. Nov.	10	" 11 A.M. Nov.	12	from Reservoirs Nos. 2, 3.
"	11 A.M. Nov.	12	" 11 A.M. Dec.	2	from Reservoir No. 2.
"	11 A.M. Dec.	2	" 11 A.M. Dec.	9	from Reservoirs Nos. 2, 3.
"	11 A.M. Dec.	9	" 12 M. Dec.	27	from Reservoir No. 2.
"	12 M. Dec.	27	" 12 M. Dec.	28	No flow.
"	12 M. Dec.	28	" 7 A.M. Jan.	1	from Reservoirs Nos. 2, 3.

The height of the water in the various storage reservoirs on the first day of each month is as follows :

		RESERVOIRS.					FARM POND.	WHITE-HALL POND	LAKE CO-CHITUATE.
		No. 1.	No. 2.	No. 3.	No. 4.	No. 6.			
		Top of Flash-board.	Top of Flash-boards.	Crest of Dam.	Top of Flash-boards.	Top of Flash-boards.	High Water.	High Water.	High Water.
		159.29	167.12	175.24	215.21	295.00	149.25	327.91	134.36
January 1,	1897....	156.37	162.63	174.82	195.11	266.41	148.78	324.77	127.43
February 1,	"	156.13	161.37	173.31	199.80	271.59	149.00	325.45	128.75
March 1,	"	156.13	162.50	174.44	204.19	276.04	149.21	325.18	129.26
April 1,	"	157.94	167.21	175.29	213.70	287.63	149.45	326.88	133.86
May 1,	"	157.71	167.66	176.45	215.38	292.31	149.40	327.79	134.27
June 1,	"	159.53	166.86	176.56	215.38	294.83	149.37	328.35	134.24
July 1,	"	159.41	162.90	176.76	215.34	295.09	149.32	328.73	133.92
August 1,	"	159.43	167.77	176.50	209.04	294.23	149.14	328.52	133.16
September 1,	"	148.25	163.54	172.82	210.23	294.89	149.11	328.65	132.61
October 1,	"	148.02	162.89	169.12	205.65	294.77	148.39	327.53	131.09
November 1,	" ...	149.16	162.70	169.70	200.97	291.65	148.33	326.58	129.43
December 1,	"	149.93	163.42	170.53	203.94	292.06	147.84	326.58	129.86
January 1,	1898....	157.28	166.05	174.78	210.08	294.20	148.75	326.48	130.87

AQUEDUCTS AND DISTRIBUTING RESERVOIRS.

The Sudbury-river aqueduct has been in use 355.25 days, and has delivered 15,442,562,400 gallons to Chestnut-Hill Reservoir and 948,000,000 gallons to Lake Cochituate.

The Cochituate aqueduct has been used 361.5 days and delivered 5,738,703,800 gallons. Both aqueducts have been cleaned during the year, and all necessary repairs made.

HIGH-SERVICE PUMPING-STATIONS.

The daily average quantity pumped at the Chestnut-Hill pumping station was 1.6 per cent. more than in 1896.

Engine No. 1 was run 1,762 hours,	
50 minutes, pumping	657,146,425 gallons.
Engine No. 2 was run 1,650 hours,	
pumping	625,815,950 "
Engine No. 3 was run 6,478 hours,	
20 minutes, pumping	3,967,101,600 "
Total amount pumped	5,246,063,975 "
Amount of coal used by Engines	
Nos. 1 and 2	1,621,185 lbs.
Amount of coal used by Engine	
No. 3	3,536,754 "
Total amount of coal used	5,157,939 "
Percentage of ashes and clinkers	9.2
Quantity pumped per lb. of coal	
by Engines Nos. 1 and 2	791.4 gallons.
Quantity pumped per lb. of coal	
by Engine No. 3	1,121.7 "
Average lift in feet, Engines Nos.	
1 and 2	122.53
Average lift in feet, Engine No. 3, ...	122.67
Daily average amount pumped	14,372,800 gallons.

Table VII., on pages 174 and 175 show in detail the work done by the engines and boilers.

COST OF PUMPING.

Salaries	\$14,389 66
Fuel	6,961 33
Carried forward	\$21,350 99

<i>Brought forward</i>	.. . . .	\$21,350 99
Repairs	.. . . .	7,286 37
Oil, waste and packing	.. . . .	877 95
Small supplies	.. . . .	389 94
Total	.. . . .	\$29,905 25

Cost per million gallons raised one foot high . \$0.0465

Cost per million gallons pumped to reservoir . \$5.706

At the West Roxbury pumping-station the daily average quantity pumped was 283,300 gallons, an increase of 11.9 per cent. over the amount pumped in the previous year. At the East Boston pumping-station 447,200 gallons have been pumped for the supply of the high-service district, and 61,800 gallons per day for the Breed's Island high service. Owing to the non-completion of the 36-inch high-service line through Roxbury, it has been necessary to maintain the pumping plant on Blue Hill avenue and Wayne street during the year, and to keep it in constant service.

MYSTIC LAKE.

On January 1, 1897, the water surface was 1.66 feet below high water. Water wasted over the dam from January 5 to 12, January 22 to 25, February 7 to 10, February 13 to 19, February 23 to April 24, from April 28 to May 20, May 25 to June 22, from June 25 to 26, and from June 30 to July 3, inclusive, when waste stopped.

The water surface which on July 3 was at grade 6.77 gradually fell, reaching its lowest point—0.90 on November 2.

Filling gradually since that date it reached grade 6.04 on December 19. Waste occurred over the stop-planks from December 16 to 24, and on December 27, 28 and 31. On January 1, 1898, the water surface was at grade 5.75. The fish-way was opened on April 10, and kept open until June 25, when it was closed and remained so during the remainder of the year.

MYSTIC CONDUIT AND RESERVOIR.

The conduit was cleaned several times during the year.

MYSTIC PUMPING-STATION.

The daily average quantity pumped at the Mystic Station was 4.8 per cent. more than in 1896.

Engine No. 1 was run 2,392 hours, 50 minutes, pumping	536,515,500 gals.
Engine No. 2 was run 1,523 hours, 30 minutes, pumping	320,785,788 "
Engine No. 3 was run 1,391 hours, pumping	470,195,300 "
Engine No. 4 was run 7,321 hours, 30 minutes, pumping	3,244,729,020 "
Total amount pumped	4,572,225,608 "
Amount of coal used by Engines Nos. 1, 2 and 3	3,769,676 lbs.
Amount of coal used by Engine No. 4, ...	3,651,427 "
Total amount of coal used	7,421,103 "
Percentage of ashes and clinkers	11.4
Quantity pumped per lb. of coal by Engines Nos. 1, 2 and 3	350.2 gals.
Quantity pumped per lb. of coal by Engine No. 4	888.6 "
Average lift in feet, Engines Nos. 1, 2 and 3	147.08
Average lift in feet, Engine No. 4	149.24
Daily average amount pumped	12,526,700 gals.

COST OF PUMPING.

Salaries	\$12,372 46
Fuel	11,242 51
Repairs.	3,426 92
Oil, waste and packing	726 89
Small supplies	221 18
Total	\$27,989 96
Cost per million gallons raised one foot high, ...	\$0.0412
Cost per million gallons pumped to reservoir, ...	\$6.122

Table VIII., on pages 176 and 177, shows in detail the work done by the engines during the year.

CONSUMPTION.

The daily average consumption for the year was as follows:

Sudbury and Cochituate Works	57,867,300 gals.
Mystic Works	12,518,900 "
Total for the combined supplies	70,386,200 "

an increase of 2,146,900 gallons, or 3.1 per cent. over that of the previous year. During the year, Charlestown has been supplied from the Mystic Works, excepting the periods between September 28 and December 1, when the supply was from the Cochituate Works.

The following table shows the consumption per inhabitant for the past two years:

MONTH.	Cochituate.		Mystic.		Combined Supplies.	
	Consumption in Gallons per Capita.		Consumption in Gallons per Capita.		Consumption in Gallons per Capita.	
	1896.	1897.	1896.	1897.	1896.	1897.
January	128.1	127.5	96.9	100.4	121.0	121.2
February	131.8	123.2	102.5	101.3	127.4	118.2
March	134.5	121.9	96.9	98.9	125.9	116.6
April	118.3	117.1	87.3	94.1	111.3	111.7
May	106.9	110.1	85.8	89.4	102.1	105.2
June	113.2	112.3	88.4	82.2	107.2	105.4
July	116.0	125.0	86.9	85.7	110.1	115.8
August	112.9	123.9	85.4	80.3	107.9	113.7
September	107.1	124.9	83.1	79.9	102.7	114.4
October	106.4	114.2	78.8	81.3	100.1	108.1
November.....	107.3	104.0	76.5	75.2	100.2	98.6
December	118.6	111.4	90.6	82.7	112.1	104.7
Average	116.8	117.8	88.3	87.8	110.6	111.1

CORROSION OF PIPES BY ELECTROLYSIS.

A general and marked improvement has been observed during the past year, in the electrical conditions of the water-pipes throughout the city; this result has been attained largely by reason of the work done by the Boston Elevated Railway Company, for the improvement of its return circuits. While the danger districts in the city have been apparently reduced in number, yet sections still remain in which the conditions are far from satisfactory, and systematic and frequent observations are necessary to guard against damage in the future.

The electrical investigations have been carried on during

the year by Messrs. Stone & Webster; details of their work is given in the following report:

STONE & WEBSTER, ELECTRICAL EXPERTS AND ENGINEERS.
4 POST OFFICE SQUARE, BOSTON, March 7, 1898.

WILLIAM JACKSON, ESQ.,
City Engineer, Boston, Mass.:

DEAR SIR: At your request in the autumn of last year, 1897, we continued our investigation of the electrical conditions of the water-pipes in the City of Boston and beg to report as follows:

We first made an examination throughout the entire city to find whether there was any general improvement in conditions over the previous years, and also to find whether there were any places that needed special investigation.

We found that the electrical conditions of the piping in nearly all sections of the city were such as to indicate less liability to corrosion from electrolysis than in the year 1896.

We did not take as many readings in the general survey of the city as in former years, because we have found that there is in no case a serious danger district local to two or three hydrants. We therefore took only about 600 hydrant readings, while in 1896 we took about 1,000. The improvement in general conditions is shown by the small number of danger districts, and by the decrease in the percentage of positive readings, and by the decrease in the average size of the negative readings. This is shown approximately in the following table which is based upon readings taken in the same localities each year. The figures are not exact as some of the readings are unreliable, and were therefore not taken into account in making up the averages:

	1896.	1897.
Per cent. of Positive readings	28	19
Average size of Positive readings in volts,	.009	.009
Average size of Negative readings in volts,	.023	.006

Negative readings indicate safety to the pipes at the points at which the readings are taken, because they show that the current is flowing on to the pipes at these places. It is important, however, to reduce the size of the negative readings as well as that of the positive, because high negative readings show that there is a strong tendency for the current to flow on to the pipes, and any current which flows on must pass through the joints to be taken off at other points. The size

of the readings must not, however, be considered as a very accurate indication of the average conditions for the two years, because a change in the amount of moisture in the earth might make a very decided change in the size of the readings.

One exception to the general improvement was found in the Dorchester district. Here the new power station on Freeport street was started by the West End Street Railway Company about a year ago, and in the neighborhood of the station we found many places where there were indications of current flowing off the service pipes sufficient, probably, to do them decided injury in the course of a few years. We had excavations made on Park and Freeport streets and found signs of corrosion in four out of six places examined, and in one of these places the pipe had been badly attacked. We think, therefore, that this district should be carefully watched so long as there are indications of general or large local flow of current from the pipes to the ground. In the part of Park street where the indications of danger were most decided there are no car tracks, but the feeder and return wires are laid under the street in a wooden conduit, the feeders being, we are told, encased in tubing, and the returns laid in a bed of cement. Between the outside of the wooden conduit, which was damp, and the service pipes, we found a difference of potential as high as .3 of a volt, a sufficient indication that a considerable current might be flowing between them.

In addition to the general survey we have made a special investigation on the boundary lines of the city and find that there is a tendency for the current to flow between the piping system of Boston and those of the surrounding towns. In general the flow of current is from other piping systems to that of Boston, but four places were found where the current flowed first in one direction and then in the other, though apparently not in very large quantities. These four places were between Newton and Boston on Tremont street; between Brookline and Boston on Huntington avenue; between Cambridge and Boston on Western avenue, and between Hyde Park and Boston on River street. The danger around the boundary lines is, therefore, in most cases, to the pipes of surrounding towns, but as the current flowing into the Boston piping system must leave it again and must flow through the joints, there is a chance that electrolytic action may be produced.

It is probable that the amount of current flowing in this way is not sufficient to do any serious damage, but we think that the matter should be examined into more carefully to

make sure that this is the case. We had hoped to obtain more complete information on the subject during the fall, and had prepared a special testing outfit for the work, but were able to use it only a few times owing to the setting in of the cold weather.

It seems to us advisable to continue investigation along the boundaries more carefully in the spring, and to take measurements from time to time in the Dorchester district and certain other localities.

The accompanying blue prints show the location of positive readings of .005 volt or higher for 1896 and 1897.

At your request we have secured the following detailed information regarding the work done by the Boston Elevated Railway Company to improve its return circuit:

"The company has complete records of the electrical conditions in the different parts of its system and examinations and tests are made often enough to show any material changes that may occur. For each part of the track a diagram is prepared showing the difference of potential between the track and water-pipes and also the current that will flow when these two points are connected.

"On many of these diagrams the resistances of the rail joints are also plotted. These diagrams are on uniform sheets, which are bound together so that the data for all parts of the system can be readily inspected at any time.

"In the last three years a large amount of copper has been put in to increase the efficiency of the return circuit. This copper is in the form of 500,000 circular mil. cable. The following table shows the increase in the amount installed:

"Return circuit copper in 1895	.	.	.	644,000 lbs.
" " " " 1896	.	.	.	902,000 "
" " " " 1897	.	.	.	1,370,000 "

"This last amount is 4,680 lbs. per mile of track.

"The efficiency of the rail bonds has been greatly increased, and all new track is now bonded with two No. 0000 copper bonds.

"A large amount of reconstruction has been done, and in all this work modern methods of bonding have been employed."

Very truly yours,

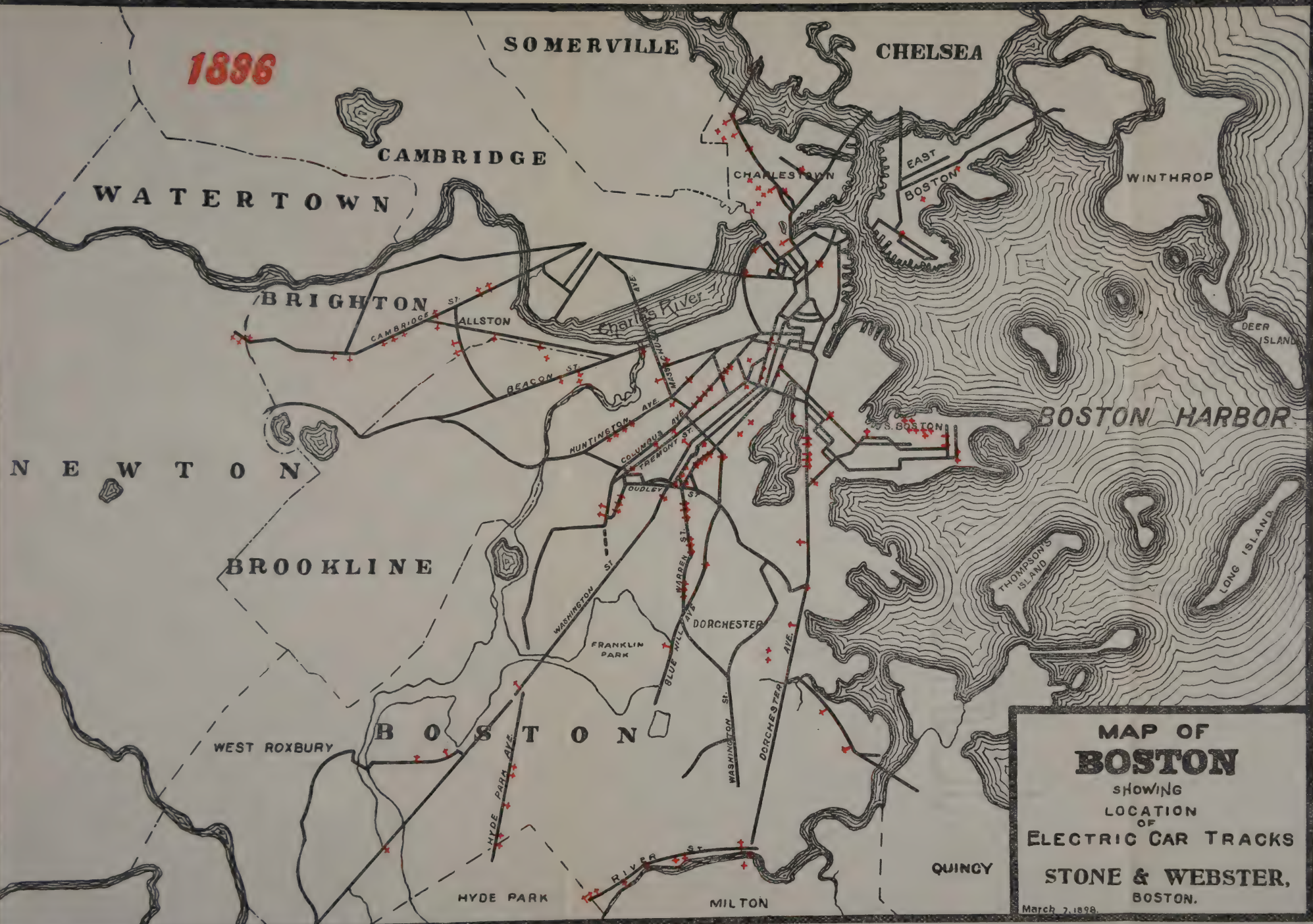
(Signed)

STONE & WEBSTER.

DISTRIBUTION.

On the Cochituate Works 26.6 miles of pipe were laid and 7.5 miles were abandoned, making a net increase of 19.1 miles and a total length of 627.1 miles.

1896



**MAP OF
BOSTON**
showing
LOCATION
OF
ELECTRIC CAR TRACKS
STONE & WEBSTER,
BOSTON.
March 7, 1898.

1897

SOMERVILLE

CHELSEA

CAMBRIDGE

WATERTOWN

CHARLESTOWN

EAST BOSTON

WINTHROP

BRIGHTON

CAMBRIDGE

ALLSTON

Charles River

BEACON ST.

MUNTINGTON AVE.

COLUMBUS AVE.

TREMPONT ST.

ODDLEY ST.

WASHINGTON ST.

FRANKLIN PARK

DORCHESTER

BLUE HILL AVE.

WASHINGTON ST.

DORCHESTER AVE.

BOSTON HARBOR

W.S. BOSTON

NEWTON

BROOKLINE

WEST ROXBURY

BOSTON

HYDE PARK AVE.

HYDE PARK

CHARLES RIVER

MILTON

QUINCY

MAP OF
BOSTON

showing
LOCATION
OF
ELECTRIC CAR TRACKS

STONE & WEBSTER,
BOSTON.

March 7, 1898.



A statement of the larger sizes of mains laid during the past year is as follows :

In Fisher avenue, Brookline, between Boylston street and Fisher-Hill Reservoir, a 42-inch pipe was laid for a distance of 1,108 feet, giving a second line where the high-service supply for the city has been dependent upon a single 30-inch pipe; the Dorchester high service has been advanced by laying 5,100 linear feet of 36-inch pipe in Columbus avenue, Walnut park and Georgia street, and 1,506 linear feet in Blue Hill avenue, Geneva avenue and Bowdoin street, making the 36-inch line continuous as far as Grove Hall, with the exception of a short gap at the crossing of Stony brook which can be filled up early in the coming season. Owing to the fact that Congress street is about to be raised over the tracks of the N. E. R.R., it was necessary to lay 1,520 linear feet of 30-inch and 24-inch pipe in Danby and C streets, abandoning at the same time 1,464 linear feet of 30-inch and 24-inch pipe in D and Congress streets, the latter work being done by contract; in South street and the roadway of Arnold arboretum, 1,500 linear feet of 24-inch pipe was laid (about 840 feet of it by contract) forming part of the West Roxbury high service. The 24-inch low service in Dorchester was extended, by laying a 20-inch main in Adams street for a distance of 5,474 feet, making a needed improvement in the service at Neponset and Milton Lower Mills. For better fire protection a 20-inch pipe was laid in Canton street, from Albany to Tremont street, a distance of 2,554 feet, connecting with the large supply mains in the latter street. In East Boston, 1,500 linear feet of 20-inch pipe was laid in Border street, from Maverick street to Central square in extension of the 20-inch line laid last season.

An unusually large amount of relaying has been done during the year; among the important pieces of work of this class are the following: Washington street, Kneeland street to Dover street relaid with 16-inch; State street, Washington street to Commercial street, relaid with 16-inch; Maverick street, New street to Chelsea street, relaid with 16-inch; Boylston street, Tremont street to Park square, relaid with 12-inch; Tremont street, Boylston street to Warrenton street, relaid with 12-inch.

The necessity for relaying must become more urgent each successive year. Up to 1853 about 73½ miles of water-pipes, less than twelve inches in diameter, had been laid in the streets of the city, and during the succeeding twenty years 163 additional miles of these smaller pipes were laid; a large part of this pipe is still in service, dangerously weak in places,

and everywhere badly tuberculated and filled up; two pieces of pipe have been recently taken out while relaying, in which the sound iron remaining represented in one case but 51 per cent. and in the other but 59 per cent. of the original section, the unsound parts being soft enough to be readily cut with a knife and extending in places almost through the pipe; the destruction of the iron in these two cases was not caused by the action of electricity generated for street railway purposes, electric lighting, etc., but was due to the soil in which the pipe was laid. In relaying the older pipes opportunity is taken in almost every case to increase the sizes, largely for the purpose of affording better fire protection. How important this action is, can be fully realized when it is remembered that the "hand tubs" of 1850 have given place to the modern steam fire-engines, some of which, now in commission in Boston, have a capacity of 1,350 gallons per minute.

On the Mystic Works the distributing mains have been extended 3.2 miles, and 4.9 miles have been relaid; the total length now connected with the system is 187.2 miles.

There has been an increase of 178 in the number of hydrants connected with the Cochituate Works, making a total number of 6,842.

On the Mystic Works 78 hydrants have been added, and the total number in service is 1,718.

During the year all main-pipe and other castings have been carefully inspected at the foundries; plans have been made for all pipe laid and lines and grades given when required; 217 petitions for main pipe have been reported upon and 68 contracts for rock excavation have been made. The large number of patterns of special castings, valves, hydrants, etc., have been marked with brass numbers, catalogued and systematically arranged in a storeroom. Various studies have been made, and a large amount of general routine work has been done.

Appended to this report will be found the usual tables of rainfall, consumption, etc., for the past year, and in addition, tables are given of the rainfall, rainfall collected, and percentage collected on the Cochituate water-shed since 1863, on the Sudbury-river water-shed since 1875, and on the Mystic water-shed since 1878. These will be found valuable for future reference.

Yours respectfully,

WILLIAM JACKSON,
City Engineer.

GENERAL STATISTICS.

SUDBURY AND COCHITUATE WORKS.	1894.	1895.	1896.	1897.
Daily average consumption in gallons,	46,560,000	50,801,100	56,288,200	57,867,300
Daily average consumption in gallons per inhabitant	99.8	104.3	116.85	117.8
Daily average amount used through meters, gallons.....	11,170,400	12,084,500	13,125,700	13,459,300
Percentage of total consumption metered	24.0	23.8	23.3	23.3
Number of services.....	68,556	70,879	73,230	75,685
Number of meters and motors.....	4,877	4,910	4,788	5,061
Length of supply and distributing mains, in miles.....	572.8	595.9	619.9	627.1
Number of fire-hydrants in use	6,217	6,458	6,711	6,842
Yearly revenue from water-rates.....	\$1,657,701 23	\$1,741,049 05	\$1,991,136 93	\$2,082,536 98
Yearly revenue from metered water...	\$672,474 17	\$711,467 39	\$775,354 91	\$795,910 07
Percentage of total revenue from metered water	40.5	40.9	38.0	38.2
Cost of works on February 1.....	\$23,583,967 89	\$25,052,227 53	² \$24,608,500 60	⁴ \$25,025,436 42
Yearly expense of maintenance	\$440,840 63	\$420,907 09	³ \$617,566 53	³ \$623,476 51
MYSTIC WORKS.				
Daily average consumption in gallons,	10,282,100	9,467,000	11,951,100	12,518,900
Daily average consumption in gallons per inhabitant	87.6	83.3	88.26	87.8
Daily average amount used through meters, gallons.....	2,014,000	2,105,800	2,144,300	2,264,200
Percentage of total consumption metered	19.6	22.2	17.9	18.1
Number of services.....	23,257	24,120	24,870	25,776
Number of meters and motors.....	515	525	536	522
Length of supply and distributing mains, in miles.....	173.7	178.6	184.0	187.2
Number of fire-hydrants in use.....	1,446	1,543	1,639	1,718
Yearly revenue from water-rates.....	\$453,627 50	\$471,188 47	\$501,755 05	\$521,262 68
Yearly revenue from metered water ...	\$115,811 32	\$121,436 10	\$122,050 66	\$127,439 76
Percentage of total revenue from metered water	25.6	25.8	24.3	24.5
Cost of works on February 1.....	¹ \$1,676,471 94	\$1,803,775 29	\$1,806,316 72	\$1,806,316 72
Yearly expense of maintenance	\$156,214 05	\$189,194 61		

¹ \$52,637.00 credited on account of sale of portion of Mystic sewer.² \$1,118,975.74 credited by amount paid by State.³ Mystic department combined with Cochituate.⁴ \$1,154,766.84 credited by amount paid by State.

TABLE I.
Daily Average Consumption of Water, in Gallons, from the Cochituate and Mystic Works.

MONTH.	COCHITUATE WORKS.							MYSTIC WORKS.						
	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1891.	1892.	1893.	1894.	1895.	1896.	1897.
January	37,230,100	36,756,400	53,847,100	48,395,000	51,476,100	60,254,800	61,331,300	9,359,300	9,878,200	14,129,700	11,823,500	9,528,100	13,462,300	14,516,500
February	37,280,700	38,831,500	51,299,400	49,207,500	58,905,100	63,526,700	59,401,300	9,466,900	10,332,200	13,174,700	12,295,000	12,953,200	14,290,700	14,712,200
March	35,533,400	38,395,100	48,700,200	44,844,300	52,706,700	63,513,300	58,846,900	8,811,000	9,970,500	11,692,700	10,720,800	8,712,200	13,552,300	14,415,300
April	33,751,600	37,171,000	45,573,100	40,070,200	46,614,200	56,002,300	56,630,300	8,045,800	9,145,000	9,812,500	10,236,200	8,098,000	12,262,100	13,770,200
May	36,580,700	37,035,900	43,451,500	41,827,700	46,470,500	50,684,500	53,340,700	8,841,300	9,204,300	9,817,400	10,661,000	9,426,500	12,087,100	13,121,900
June	37,801,900	41,564,000	44,125,100	45,906,430	47,089,500	53,757,900	54,564,100	9,478,400	10,146,300	10,460,000	12,552,300	11,509,200	12,497,800	12,120,700
July	39,062,600	45,738,100	48,986,900	50,044,000	50,064,800	56,937,700	60,782,000	9,581,700	10,702,900	10,167,000	12,172,000	9,265,900	10,908,600	12,680,900
August	39,460,400	45,031,600	48,062,000	47,288,500	53,095,100	57,215,700	60,365,400	9,122,300	9,751,500	9,826,200	10,696,700	8,117,400	9,620,200	11,922,100
September	40,677,700	45,261,900	46,926,500	44,558,700	53,346,900	54,345,200	60,980,600	9,128,700	9,549,400	9,115,000	8,703,600	9,937,900	9,403,300	11,910,800
October	53,884,000	44,626,700	46,416,600	47,072,500	49,278,000	56,947,600	59,328,900	9,259,100	9,340,500	9,630,400	7,421,200	8,667,300	11,302,700	9,694,600
November	36,640,800	41,347,800	44,328,900	47,101,500	43,258,600	51,441,700	54,109,500	8,585,200	9,230,000	9,569,700	7,563,100	8,453,400	11,003,700	9,897,500
December	37,342,500	43,766,400	47,807,800	48,511,600	52,934,800	56,957,700	54,707,500	8,960,600	10,473,700	11,620,800	8,667,800	9,276,700	13,088,400	12,470,500
Yearly average	37,686,900	41,312,400	47,453,200	46,560,000	50,801,100	56,288,200	57,867,300	9,055,290	9,810,800	10,742,500	10,282,100	9,457,000	11,951,100	12,518,900

¹ From June 7 to July 29 about 3,000,000 gallons per day were wasted from a blow-off.

² After September 12, Charlestown was supplied with Cochituate water.

³ Charlestown was supplied with Cochituate water from January 1 to February 6, February 21 to May 18, and July 13 to January 1, 1896.

⁴ Charlestown was supplied with Cochituate water from January 1 to 7, July 13 to September 28.

⁵ In October 2,542,000 gallons wasted from 48-inch line in Brookline. In November 2,664,400 gallons wasted from 48-inch line in Brookline.

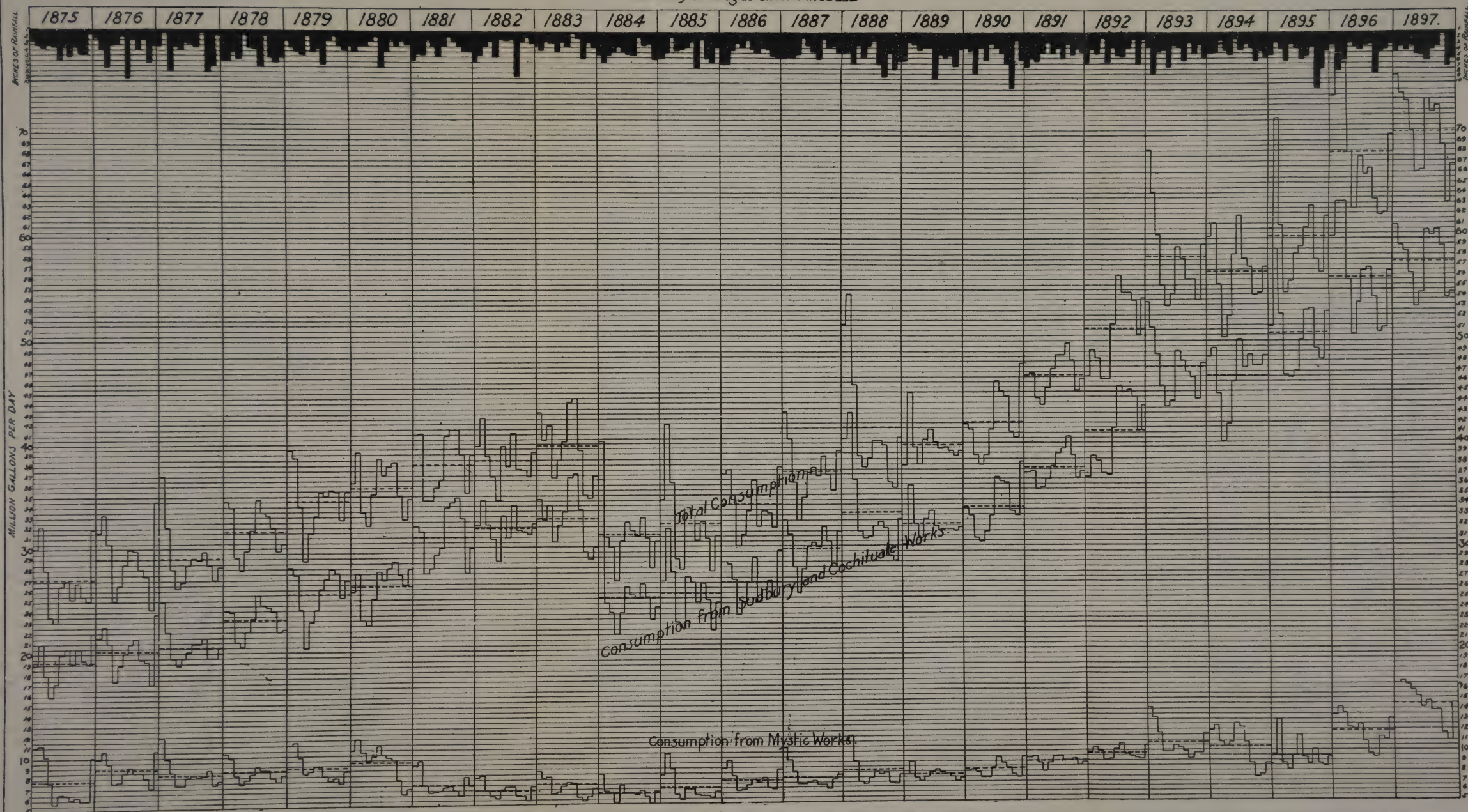
⁶ Charlestown was supplied with Cochituate water from September 28 to December 1 and in December Metropolitan Water Works used about 2,766,500 gallons.

⁷ From November 1 to 4 about 11,000,000 gallons were wasted from a blow-off, and during November and December, Metropolitan Water Works used about 8,537,400 gallons. Between June and December, Revere was supplied with 34,341,400 gallons from the Cochituate supply.

BOSTON WATER WORKS.

Diagram showing the rainfall and daily average Consumption for each month.

— Yearly Averages shown thus —



1881	1881	0881	1881	1881	1881	1881	1881
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1881 1881 0881 1881 1881 1881 1881 1881

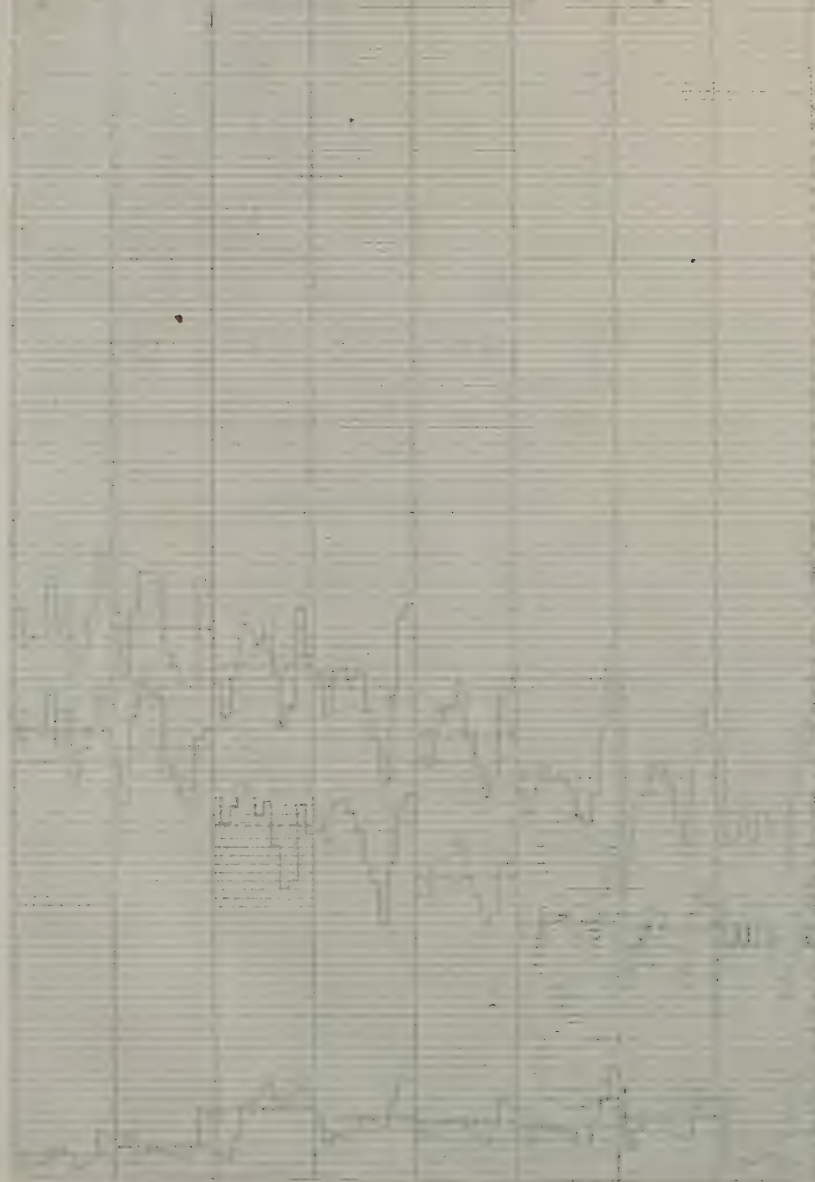


TABLE II.
Diversion of Sudbury River Water, 1890-1897.

MONTH.	1892.		1893.		1894.		1895.		1896.		1897.	
	To Lake Cochituate.	To Chestnut Hill Res'r.	To Chestnut Hill Res'r.	To Lake Cochituate.	To Chestnut Hill Res'r.	To Lake Cochituate.	To Chestnut Hill Res'r.	To Lake Cochituate.	To Chestnut Hill Res'r.	To Lake Cochituate.	To Chestnut Hill Res'r.	
	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	
January .....	.....	630,800,000	1,325,900,000	.....	1,012,000,000	1,300,000	1,186,100,000	.....	1,357,300,000	210,500,000	1,393,000,000	
February .....	.....	610,400,000	957,600,000	.....	944,000,000	.....	1,318,400,000	.....	1,346,900,000	4,000,000	1,242,500,000	
March	45,100,000	625,200,000	1,023,900,000	520,100,000	947,100,000	680,000,000	1,115,800,000	.....	1,502,700,000	462,200,000	1,317,500,000	
April	545,000,000	662,500,000	917,000,000	134,100,000	725,600,000	.....	982,300,000	300,000	1,252,800,000	31,500,000	1,254,100,000	
May	114,700,000	690,400,000	858,600,000	215,800,000	826,500,000	87,700,000	931,500,000	35,200,000	1,101,300,000	9,700,000	1,181,600,000	
June	197,500,000	779,300,000	856,700,000	80,700,000	875,500,000	114,000,000	941,100,000	.....	1,128,800,000	.....	1,147,000,000	
July .....	.....	948,000,000	1,040,800,000	.....	1,064,600,000	.....	1,061,900,000	.....	1,285,900,000	66,200,000	1,355,700,000	
August .....	.....	897,700,000	994,100,000	.....	951,600,000	.....	1,147,600,000	.....	1,291,500,000	163,900,000	1,377,700,000	
September .....	.....	876,300,000	948,300,000	.....	987,100,000	.....	1,142,800,000	.....	1,163,500,000	.....	1,365,800,000	
October .....	.....	908,500,000	956,600,000	1,100,000	958,500,000	6,000,000	951,700,000	.....	1,086,000,000	.....	1,367,300,000	
November .....	.....	788,000,000	862,700,000	400,000	1,021,000,000	5,600,000	998,600,000	.....	1,070,700,000	.....	1,159,681,000	
December .....	.....	1,216,100,000	995,700,000	1,000,000	1,137,100,000	1,600,000	1,130,700,000	.....	1,259,900,000	.....	1,220,681,600	
Totals	902,300,000	9,633,200,000	11,737,900,000	962,200,000	11,450,600,000	896,800,000	12,908,500,000	35,500,000	14,857,300,000	948,000,000	15,442,562,600	
Total divers'n from Sud- bury river,	10,535,500,000		11,737,900,000		12,412,800,000		13,805,300,000		14,892,800,000		16,330,562,600	
Average daily diversion for whole year.	28,800,000		32,158,600		34,007,700		37,822,700		40,690,700		44,905,700	

TABLE III.

Statement showing Amount of Water drawn from Lake Cochituate; Amount wasted; Amount of Rainfall collected in Lake; Amount received into Lake from Sudbury River; Percentage of Rainfall collected, etc., 1852 to 1897; Watershed of Lake, 12,077 Acres.

YEAR.	Amount of water drawn from Lake.	Amount of Water wasted from Lake.	Amount received into Lake from Sudbury River.	STORAGE.		Total Amount of Rainfall collected in Lake.	Daily average amount of Rainfall col- lected in Lake.	Rainfall. Inches.	Rainfall col- lected.	Percentage of Rainfall collected.
				Gain.	Loss.					
	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Inches.	Inches.	Per cent.
1852 1	2,974,042,800	4,020,566,900	.....	.....	261,360,000	6,733,249,700	18,396,900	47.33	20.61	43.
1853	3,117,939,500	3,166,417,500	.....	239,580,000	.....	6,523,937,000	17,873,800	55.73	19.51	35.
1854	3,614,230,000	4,187,733,000	.....	.....	217,800,000	7,584,163,000	20,778,500	43.15	22.87	53.
1855	3,776,399,500	No acc't kept.	.....	.....	326,700,000	.....	.....	34.96	.....	.....
1856	4,409,787,600	"	.....	598,950,000	.....	.....	.....	40.80	.....	.....
1857	4,644,390,000	10,625,900,000	.....	32,670,000	.....	15,303,560,000	41,927,600	63.10	46.69	74.
1858	4,689,155,000	1,934,500,000	.....	.....	141,570,000	6,482,085,000	17,759,000	48.66	19.46	40.
1859 2	4,808,875,000	7,569,000,000	.....	283,140,000	.....	12,661,015,000	34,687,700	49.02	38.24	78.
1860	6,309,108,000	None.	.....	174,240,000	.....	6,483,348,000	17,714,100	55.44	19.40	35.
1861	6,639,095,900	3,377,559,000	.....	.....	1,459,260,000	8,557,394,900	23,444,900	45.44	25.45	56.
1862	6,059,000,000	33,200,000	.....	1,306,800,000	.....	7,399,000,000	20,271,200	49.09	22.36	45.
1863	5,927,052,500	2,165,696,500	.....	763,300,000	.....	8,855,049,000	24,200,400	69.30	26.88	39.

1864.....	6,105,306,700	1,368,746,000	.....	.....	.....	1,848,577,000	5,625,475,700	15,370,200	42.60	18.35	43.
1865.....	4,621,630,000	1,688,120,700	.....	.....	743,242,500	.....	7,052,993,200	19,823,300	49.46	20.50	41.
1866.....	4,463,585,000	None.	.....	.....	743,242,500	.....	5,206,827,500	14,265,800	62.32	16.01	26.
1867.....	4,951,225,000	2,482,041,000	.....	.....	.....	698,811,000	6,734,455,000	18,450,600	56.25	21.80	39.
1868.....	5,405,515,000	2,507,684,000	.....	.....	346,371,000	.....	8,259,570,000	22,567,200	49.71	24.98	50.
1869.....	5,503,751,000	1,635,570,000	.....	.....	480,882,000	.....	7,620,203,000	20,877,200	64.34	21.39	34.
1870.....	5,477,810,000	4,818,971,000	.....	.....	.....	1,736,085,000	8,560,686,000	23,403,900	55.89	26.08	47.
1871.....	5,223,500,000	None.	.....	.....	.....	250,833,000	4,972,567,000	13,623,500	45.39	15.16	33.
1872.....	5,775,151,200	None.	.....	1,676,666,400	1,543,995,500	.....	5,642,480,300	15,416,000	48.47	17.22	35.
1873.....	6,511,826,900	.....	.....	.....	.....	545,132,000	8,914,671,900	24,423,800	45.43	27.13	60.
1874.....	6,623,972,900	.....	.....	.....	.....	1,367,715,000	6,402,109,600	17,540,000	35.93	19.52	54.
1875.....	7,092,955,500	None.	.....	2,555,800,000	1,222,885,000	.....	5,760,040,500	15,780,900	45.49	17.57	39.
1876.....	7,277,175,200	1,619,243,800	.....	2,538,300,000	43,438,000	.....	6,411,557,000	17,517,900	48.49	19.54	40.
1877.....	7,626,889,200	1,484,978,600	.....	1,894,350,000	378,737,000	.....	7,596,244,800	20,811,600	43.80	23.17	53.
1878.....	437,904,700	3,341,875,000	.....	2,668,300,000	219,789,000	.....	8,637,268,700	23,663,700	53.58	26.34	49.
1879.....	6,051,828,900	1,523,361,400	.....	411,300,000	.....	1,322,697,300	5,841,203,000	16,003,300	38.01	17.81	47.
1880.....	4,284,147,100	65,577,700	.....	826,700,000	.....	146,265,000	3,376,759,800	9,226,100	35.83	10.30	29.
1881.....	2,846,459,700	2,231,016,700	.....	187,600,000	468,089,400	.....	5,357,965,800	14,679,400	41.09	16.34	40.
1882.....	3,935,490,600	1,338,543,700	.....	.....	.....	357,334,700	4,936,690,600	13,525,200	40.29	15.05	37.
1883.....	4,731,227,700	162,361,800	.....	1,245,100,000	.....	334,400,000	3,314,089,500	9,079,700	31.20	10.11	32.
1884.....	4,533,156,450	1,842,887,100	.....	1,416,300,000	1,340,436,700	.....	6,300,130,250	17,213,450	45.57	19.21	42.
1885.....	4,091,674,900	1,006,622,800	.....	.....	8,594,800	.....	5,106,892,500	13,991,500	43.66	15.57	36.

¹ Observations of rainfall at Lake Cochituate commenced 1852, and these observations are assumed as correct for the whole district.

² Lake raised two feet.

TABLE III.—*Concluded.*

Statement showing Amount of Water drawn from Lake Cochituate; Amount wasted; Amount of Rainfall collected in Lake; Amount received into Lake from Sudbury River; Percentage of Rainfall collected, etc., 1852 to 1897; Water-shed of Lake, 12,077 Acres.

YEAR.	Amount of Water drawn from Lake.	Amount of Water wasted from Lake.	Amount received into Lake from Sudbury River.	STORAGE.		Total Amount of Rainfall collected in Lake.	Daily average amount of Rainfall col- lected in Lake.	Rainfall. Inches.	Rainfall col- lected.	Percentage of Rainfall collected.
				Gain.	Loss.					
	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Inches.	Inches.	Per cent.
1886.....	4,432,536,100	3,116,283,200	.....	.....	360,652,000	7,188,157,300	19,693,600	46.97	21.92	47.
1887.....	4,802,120,700	3,658,652,900	.....	.....	763,205,000	7,697,568,600	21,089,200	41.58	23.47	56.
1888.....	4,968,503,100	4,229,200,000	.....	959,309,000	.....	10,157,012,100	27,751,400	56.93	30.97	54.
1889.....	5,570,423,600	3,373,929,000	233,400,000	454,766,800	.....	9,165,719,400	23,111,600	50.23	27.95	56.
1890.....	5,722,170,800	2,380,441,200	.....	.....	64,166,300	8,038,445,700	22,023,100	51.23	24.51	48.
1891.....	5,508,178,900	6,064,000,000	.....	.....	1,056,057,800	10,516,121,100	28,811,300	46.42	32.07	69.
1892.....	5,464,791,300	281,000,000	902,300,000	200,284,300	.....	5,033,775,600	13,753,500	39.04	15.35	39.
1893.....	5,623,532,500	253,300,000	.....	.....	89,200,000	5,789,632,500	15,862,000	45.28	17.65	39.
1894.....	5,520,092,100	None.	962,200,000	.....	296,900,000	4,200,992,100	11,674,000	39.08	12.99	33.
1895.....	5,654,765,700	657,600,000	896,800,000	1,200,400,000	.....	6,615,965,700	18,125,900	48.96	20.17	41.
1896.....	5,731,790,000	1,907,000,000	35,500,000	.....	998,000,000	6,605,290,000	18,047,200	42.78	20.14	47.
1897.....	5,738,703,800	117,000,000	948,000,000	684,500,000	.....	5,592,203,800	15,321,100	44.79	17.05	38.

TABLE IV.

Statement showing Amount of Water diverted from Sudbury River to Lake Cochituate and Chestnut Hill Reservoir; Amount wasted; Amount of Flow in River; Percentage of Rainfall collected, etc., 1875 to 1897.

(Water-shed from 1875 to 1878, inclusive—77,764 sq. miles; in 1879 and 1880—78,238 sq. miles; and from 1881 to 1897, inclusive—75.2 sq. miles.)

YEAR.	Amount of Water diverted to Lake Cochituate and Chestnut Hill Reservoir.	Amount of Water used by Framingham Water Co.	Amount of Water Wasted from River.	STORAGE.		Total Amount of Flow in River.	Daily average Amount of Flow in River.	Rainfall collected.	Percentage of Rainfall collected.
				Gain.	Loss.				
				Gallons.	Gallons.			Inches.	Per cent.
1875.	2,555,800,000	.....	24,371,600,000	66,300,000	.....	27,538,700,000	75,539,200	45.490	44.88
1876.	2,528,300,000	.....	29,942,300,000	.....	160,700,000	32,309,300,000	88,278,400	49.563	48.24
1877.	1,894,350,000	.....	32,438,300,000	112,100,000	.....	34,444,750,000	94,369,200	44.018	57.90
1878.	3,422,100,000	.....	37,125,200,000	654,700,000	.....	41,202,000,000	112,882,200	57.931	52.63
1879.	3,749,200,000	.....	20,817,500,000	902,200,000	.....	25,528,900,000	69,942,200	41.419	45.33
1880.	6,230,200,000	.....	11,290,000,000	.....	958,600,000	16,561,600,000	42,250,300	38.177	31.91
1881.	8,845,300,000	.....	17,279,000,000	751,700,000	.....	26,876,000,000	73,633,900	44.160	46.56
1882.	7,735,200,000	.....	16,273,900,000	.....	352,600,000	23,656,600,000	64,812,300	39.394	45.95
1883.	8,455,000,000	.....	7,251,900,000	.....	1,086,400,000	14,620,500,000	40,056,200	82.780	34.13
1884.	6,110,600,000	.....	23,228,900,000	1,744,600,000	.....	31,084,100,000	84,929,200	47.135	50.46
1885.	5,224,700,000	61,800,000	19,878,800,000	.....	446,900,000	24,718,400,000	67,721,600	43.545	43.44
1886.	5,266,600,000	76,600,000	23,023,000,000	1,464,500,000	.....	29,831,700,000	81,730,700	46.065	49.55
1887.	6,124,100,000	87,500,000	25,234,500,000	117,400,000	.....	31,663,500,000	86,740,300	42.705	56.73

TABLE IV.—*Concluded.*

Statement showing Amount of Water diverted from Sudbury River to Lake Cochituate and Chestnut-Hill Reservoir; Amount wasted; Amount of Flow in River; Percentage of Rainfall collected, etc., 1875 to 1897.

(Water-shed from 1875 to 1878, inclusive=77,764 sq. miles; in 1879 and 1880=78,238 sq. miles; and from 1881 to 1897, inclusive=75.2 sq. miles.)

YEAR	Amount of Water diverted to Lake Cochituate and Chestnut Hill Reservoir.	Amount of Water used by Framingham Water Co.	Amount of Water Wasted from River.	STORAGE.		Total Amount of Flow in River.	Daily average Amount of Flow in River.	Rainfall.	Rainfall collected.	Percentage of Rainfall collected.
				Gain.	Loss.					
	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Inches.	Inches.	Per cent.
1888	7,224,700,000	61,500,000	39,040,500,000	390,600,000	.....	46,717,300,000	127,642,900	57.465	35.749	62.21
1889	6,363,900,000	59,500,000	31,550,400,000	.....	2,800,000	37,971,000,000	104,030,100	49.95	29.056	58.17
1890	6,596,000,000	74,500,000	28,667,100,000	.....	57,400,000	35,280,200,000	96,658,100	53.00	26.998	50.94
1891 ...	8,306,600,000	80,500,000	28,799,600,000	.....	1,100,800,000	36,085,900,000	98,865,500	49.52	27.612	55.76
1892	10,635,500,000	82,800,000	11,143,000,000	.....	257,700,000	21,503,600,000	58,753,000	41.83	16.456	39.34
1893	11,737,900,000	103,000,000	17,405,500,000	.....	789,800,000	28,456,600,000	77,963,300	48.225	21.774	45.15
1894	12,412,800,000	117,000,000	6,715,900,000	1,901,600,000	.....	21,147,300,000	57,937,800	39.740	16.182	40.72
1895	13,805,300,000	132,200,000	15,545,600,000	1,137,920,000	.....	31,621,000,000	86,632,900	50.62	24.196	47.80
1896	14,892,800,000	139,300,000	15,528,600,000	.....	2,522,500,000	28,038,200,000	76,607,100	43.70	21.453	49.09
1897	16,390,562,000	117,600,000	6,325,937,600	4,368,900,000	.....	27,203,000,000	74,528,800	46.19	20.815	45.06

TABLE V.

Statement showing Amount of Water drawn from Mystic Lake; Amount wasted; Amount of Rainfall collected in Lake; Percentage of Rainfall collected, etc., 1876 to 1897; Water-shed of Lake, 17,200 Acres.

YEAR.	Amount of Water drawn from Lake.	Amount of Water wasted from Lake.	STORAGE.		Total Amount of Rainfall collected in Lake.	Daily Average amount of Rainfall collected in Lake.	Rainfall.	Rainfall collected.	Percentage of Rainfall collected.
			Gain.	Loss.					
	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Inches.	Inches.	Per cent.
1876	3,230,101,300	6,309,774,700	.....	32,583,000	9,567,293,000	26,140,100	47.00	20.49	43.6
1877	3,069,554,800	7,250,223,500	.....	16,291,400	10,303,486,900	25,228,700	43.095	22.06	51.2
1878	3,367,490,400	8,718,547,600	.....	26,000,000	12,060,038,000	33,041,200	64.065	25.82	47.8
1879	3,490,848,200	4,625,691,800	.....	203,000,000	7,913,540,000	21,686,900	35.30	16.94	48.0
1880	3,692,195,700	2,158,761,200	.....	113,500,000	5,703,756,900	15,584,000	34.42	12.21	35.5
1881	2,815,579,900	5,534,300,000	371,200,000	.....	8,721,079,900	23,893,400	41.91	18.67	44.5
1882	2,570,896,700	4,444,668,000	15,000,000	.....	7,080,564,700	19,261,800	39.165	15.05	38.4
1883	2,664,514,200	2,034,702,600	.....	347,579,000	4,351,637,800	11,922,300	31.22	9.32	29.84
1884	2,469,761,000	6,574,003,800	380,600,000	.....	9,424,364,800	25,749,600	44.39	20.18	45.46
1885	2,639,278,800	5,558,860,500	.....	33,200,000	8,194,939,300	22,451,900	44.50	17.55	39.43
1886	2,862,947,500	7,743,258,900	.....	28,400,000	10,577,806,400	28,980,300	45.56	22.65	49.71
1887	2,934,257,500	7,414,213,000	.....	11,000,000	10,357,470,500	28,376,600	46.42	22.17	47.77
1888	3,205,121,100	11,334,533,100	.....	6,000,000	14,533,714,200	39,709,600	56.745	31.12	54.84
1889	3,007,539,800	8,879,757,500	12,000,000	.....	11,899,327,300	32,600,900	50.395	25.48	50.56

TABLE V. — *Concluded.*

Statement showing Amount of Water drawn from Mystic Lake; Amount wasted; Amount of Rainfall collected in Lake; Percentage of Rainfall collected, etc., 1876 to 1897; Water-shed of Lake, 17,200 Acres.

YEAR.	Amount of Water drawn from Lake.	Amount of Water wasted from Lake.	STORAGE.		Total Amount of Rainfall collected in Lake.	Daily Average amount of Rainfall col- lected in Lake.	Rainfall.	Rainfall collected.	Percentage of Rainfall collected.
			Gain.	Loss.					
	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.	Inches.	Inches.	Per cent.
1890	3,212,284,500	8,953,727,900	.....	3,000,000	12,163,012,400	33,323,300	49.37	26.04	52.75
1891	3,500,817,500	10,027,714,400	.....	171,000,000	13,357,531,900	36,600,000	47.40	28.60	60.34
1892	3,811,766,200	3,474,213,200	177,000,000	.....	7,462,979,400	20,390,700	39.115	15.98	40.85
1893	4,331,743,200	4,958,528,500	.....	95,000,000	9,195,271,700	25,192,500	44.20	19.69	44.54
1894	3,996,805,100	2,752,964,200	.....	23,000,000	6,726,769,300	18,429,500	39.24	14.40	36.70
1895	3,682,848,300	4,628,156,200	156,000,000	.....	8,367,004,500	22,923,300	48.73	17.91	36.76
1896	4,617,704,600	4,559,437,400	.....	45,000,000	9,132,142,000	24,951,200	39.90	19.55	49.00
1897	4,569,393,100	3,650,425,500	17,000,000	.....	8,236,818,300	22,566,600	44.35	17.64	39.77

TABLE VI.

Average Maximum and Minimum Monthly and Yearly Heights, in Feet, above Tide Marsh Level, to which Water would rise at different Stations on the Boston Water Works.

1897.	Month.	Boston Common.		Engine house No. 7, Salem street.		Engine house No. 1, East street.		Engine house No. 33, Congress street, So. Boston.		Engine house No. 2, Fourth street, So. Boston.		Engine house No. 9, Paris street, East Boston.		Engine house No. 16, River street, Dorchester.		Engine house No. 32, Bunker Hill street, Charlestown.		710 Albany street.		Engine house No. 18, Harvard street, Dorchester.		High service.		City Hall.	
		Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
January		112.0	91.9	108.9	90.0	108.8	89.8	109.4	92.2	108.6	89.2	105.9	89.8	110.7	92.3	123.7	111.8	112.5	95.4	229.8	202.8	239.9	233.8	239.9	233.8
February		113.1	94.0	110.2	92.4	112.1	92.4	112.2	94.2	111.9	91.1	108.2	81.6	112.7	94.2	125.8	111.5	113.9	96.6	231.7	205.6	239.9	231.8	239.9	231.8
March		115.0	95.2	113.0	95.2	113.3	94.4	114.2	95.3	114.7	92.5	111.7	84.9	114.0	95.3	127.2	112.4	115.2	98.0	233.8	206.2	239.8	233.1	239.8	233.1
April		117.3	97.6	114.7	96.5	115.8	96.1	115.6	96.7	115.4	94.0	114.7	87.5	116.5	96.9	130.0	113.1	117.4	99.6	235.6	205.1	240.0	232.0	240.0	232.0
May		118.7	99.0	116.6	97.2	117.0	97.0	116.3	97.6	115.5	95.6	115.4	86.0	117.3	98.2	131.1	113.0	118.3	100.8	233.7	199.1	240.0	233.0	240.0	233.0
June		118.4	98.9	116.3	97.2	116.7	96.3	115.6	97.5	115.4	94.9	114.3	83.6	115.8	92.8	133.7	115.2	117.7	99.8	232.4	199.4	240.1	231.9	240.1	231.9
July		117.1	93.5	114.5	94.9	115.0	93.7	115.0	97.0	115.7	92.2	112.8	83.2	116.8	96.5	133.8	113.9	117.4	97.0	230.2	191.7	239.7	232.5	239.7	232.5
August		116.6	96.3	114.1	93.9	115.1	94.3	115.0	95.0	115.1	91.3	112.7	81.9	116.2	93.7	134.5	111.5	117.0	97.4	238.4	192.8	239.6	232.2	239.6	232.2
September		116.7	92.4	114.2	91.9	115.2	92.9	115.6	95.6	115.5	92.1	112.7	82.0	116.2	93.4	140.8	120.4	117.1	97.1	237.0	187.1	239.5	239.0	239.5	239.0
October		116.6	93.5	114.5	88.7	115.3	93.5	115.6	94.2	116.2	91.2	112.9	78.6	115.6	92.3	113.8	81.9	116.7	96.4	237.7	186.6	240.2	229.6	240.2	229.6
November		116.4	94.8	114.9	91.6	115.6	94.5	115.1	95.4	115.9	92.9	113.1	89.5	116.4	95.1	113.5	84.8	117.4	97.3	238.2	193.7	240.2	231.3	240.2	231.3
December		115.5	96.3	114.5	93.0	115.1	96.4	114.2	95.4	114.3	93.3	110.8	80.5	114.9	95.8	139.7	121.1	116.3	98.6	235.5	189.2	239.8	231.9	239.8	231.9
Averages		116.1	95.3	113.9	93.5	114.6	94.3	114.6	95.5	114.5	93.4	112.1	82.6	115.3	94.7	.....	.....	116.4	97.8	239.3	196.6	239.9	231.9	239.9	231.9

TABLE VII.
Statement of Operations at Chestnut Hill Pumping Station for the Year 1897.

1897.	ENGINE NO. 1.				ENGINE NO. 2.				Total amount pumped, allowed for slip.	Gallons.	Lbs.	Total amount of coal consumed.	Daily average amount of coal consumed.	Lbs.	Total amount of ashes and clinkers.	Per cent.	Gallons.	Feet.	Average lift.	Quantity pumped per lb. of coal; no correction for lighting or heating.	Duty in ft.-lbs. per 100 lbs. of coal; no correction for heating or lighting.
	Hrs.	Min.	Gallons.	Amount pumped.	Total pumping Time.	Min.	Gallons.	Amount pumped.													
Month.	Hrs.	Min.	Gallons.	Gallons.	Hrs.	Min.	Gallons.	Gallons.	Gallons.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Per cent.	Gallons.	Feet.	Average lift.	Quantity pumped per lb. of coal; no correction for lighting or heating.	Duty in ft.-lbs. per 100 lbs. of coal; no correction for heating or lighting.
January.....	213	20	78,499,500		204	05	78,203,025	156,702,525	9,217,800	217,113	12,771	17,895	8.2	721.3	123.50	73,756,200					
February.....	268	00	99,947,475		329	15	136,325,400	236,272,875	13,126,300	298,716	16,595	27,420	9.2	791.0	123.70	80,696,500					
March.....	238	30	81,337,400		261	30	93,805,575	175,142,975	11,676,200	244,372	16,291	22,076	9.0	716.7	121.03	72,200,100					
April.....	592	50	223,020,000		507	50	187,925,325	410,945,325	13,698,200	475,353	15,845	46,892	9.9	864.5	121.31	86,997,300					
May.....	126	15	48,580,500		91	00	34,231,800	82,812,400	9,201,400	91,194	10,133	10,676	11.7	908.1	121.90	91,707,200					
June.....																					
July.....	117	45	45,511,125		109	45	40,770,475	86,281,600	14,380,300	117,980	19,663	10,817	9.2	731.3	122.67	74,160,700					
August.....	102	30	40,920,925		89	35	35,369,025	76,289,950	12,715,000	94,655	15,778	8,725	9.2	806.0	123.58	83,109,200					
September.....																					
October.....																					
November.....																					
December.....	103	40	39,329,400		57	00	19,185,325	58,514,725	11,702,900	81,802	16,300	7,658	9.4	715.3	.....	{ No data kept.					
Totals and averages.....	1,762	50	657,146,425		1,650	00	625,815,950	1,282,982,375	12,103,400	1,621,185	15,294	152,159	9.4	791.4	122.53						

TABLE VII.—*Concluded.*
Statement of Operations at Chestnut Hill Pumping Station for the Year 1897.

ENGINE NO. 3.															SUMMARY, ENGINES 1, 2 and 3.			Remarks.		
Total pumping time.		Amount pumped.		Daily average pumped.		Amount of Coal consumed.		Daily average amount consumed.		Amount of ashes and clinkers.		Per cent. of ashes and clinkers.		Quantity pumped per lb. of coal; heat or light g.		Average lift of water.			Duty in ft.-lbs. per 100 lbs. of coal; No correction or lighting.	
		Gallons.	Gallons.	Gallons.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Per cent.	Lbs.	Per cent.	Gall's.	Feet.	Ft. Lbs.	Total amount pumped.	Daily average pumped.		Gallons.	Gallons.
1897.	Month.	Hrs.	Min.																	
	January.....	496	00		310,825,200	14,128,400	302,945	13,770	28,770	9.5	1,026.0	122.11	104,488,800	467,527,725	15,081,500					
	February....	263	35		166,605,600	12,815,800	168,705	12,977	15,730	9.3	987.6	122.24	100,679,500	402,878,475	14,388,500					
	March.....	400	40		245,708,400	13,650,500	208,290	11,572	21,077	10.1	1,179.7	121.42	119,456,000	430,851,375	13,575,000					
	April.....	.....	.....		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	13,698,200					
	May.....	576	00		342,977,600	12,702,900	330,658	12,246	32,272	9.8	1,037.3	121.87	105,426,500	425,790,000	13,735,200					
	June.....	702	40		413,256,200	13,775,200	353,004	11,767	33,730	9.6	1,170.7	121.44	118,568,000	413,256,200	13,775,200					Engines 1 and 2 did not run.
	July.....	598	30		365,873,200	14,072,000	302,480	11,634	31,126	10.3	1,209.6	121.78	122,850,200	452,154,800	14,485,600					
	August.....	616	30		366,945,600	14,113,300	309,154	11,891	28,788	9.3	1,186.9	121.43	120,204,000	443,235,550	14,297,900					
	September..	716	30		449,929,200	14,997,600	375,811	12,527	30,136	8.0	1,197.2	121.73	121,545,400	449,929,200	14,997,600					Engines 1 and 2 did not run.
	October.....	741	30		462,728,000	14,926,700	399,309	12,881	33,385	8.4	1,158.8	122.67	118,555,300	462,728,000	14,926,700					Engines 1 and 2 did not run.
	November...	713	45		440,384,000	14,679,500	400,803	13,360	34,213	8.5	1,098.8	122.72	112,455,800	440,384,000	14,679,500					Engines 1 and 2 did not run.
	December...	652	40		401,868,600	13,857,500	385,595	13,296	33,226	8.7	1,042.2	129.98	112,978,400	460,383,325	14,851,100					
	Totals and averages }	6,478	20		3,967,101,600	14,067,700	3,536,754	12,542	322,553	9.1	1,121.7	122.67	114,203,400	5,250,063,975	14,383,700					

TABLE VIII.

Statement of Operations at Mystic Pumping-station for the Year 1897.

1897.	ENGINE No. 1.			ENGINE No. 2.			ENGINE No. 3.			Total amount pumped.	Gallons.	Daily average amount pumped.	Total amount of coal consumed.	Lbs.	Total amount of ashes and clinkers.	Per cent. of ashes and clinkers.	Quantity pumped per lb. of coal. No correction for heating or lighting.	Average lift.	Duty in ft.-lbs. per 100 lbs. of coal. No correction for heating or lighting.
	Hrs.	Min.	Gallons.	Hrs.	Min.	Gallons.	Hrs.	Min.	Gallons.										
Month.																			
January	440	15	99,782,900	.....	.....	.....	167	15	59,590,100	159,373,000	5,141,100	426,500	13,758	51,662	12.1	373.7	146.45	45,640,600	
February	504	30	119,444,000	.....	.....	.....	.....	.....	.....	119,444,000	4,265,900	365,100	13,039	42,842	11.7	327.2	145.35	39,658,300	
March	644	45	147,149,500	.....	.....	.....	408	15	144,729,600	291,879,100	9,415,500	698,000	22,516	87,804	12.6	418.2	145.28	50,666,400	
April	59	45	12,577,700	453	15	98,223,100	250	15	85,397,000	196,377,800	6,545,900	494,945	16,498	62,213	12.6	336.7	144.39	47,779,200	
May	136	00	30,884,000	307	15	65,135,700	81	15	28,092,400	124,042,100	4,134,700	335,500	11,183	44,658	13.3	369.7	145.27	44,733,900	
June	231	20	52,209,200	2	15	571,988	.....	.....	.....	52,781,188	1,820,000	165,350	5,702	17,827	10.7	319.2	143.50	38,202,600	
July	82	45	16,336,100	303	30	62,219,900	4	45	1,324,000	79,880,000	2,576,800	257,600	8,310	23,217	9.0	310.1	147.48	38,140,900	
August	49	00	8,927,100	142	15	26,737,900	41	15	11,947,500	47,612,500	1,535,900	186,731	6,024	15,358	8.2	255.0	149.87	31,870,200	
September .....	.....	00	.....	189	30	38,042,900	69	15	19,698,700	58,641,600	2,171,900	214,500	7,944	20,714	9.7	273.4	149.93	34,184,800	
October	37	00	6,028,100	45	45	9,900,200	147	15	44,194,800	60,123,100	7,515,400	179,500	22,438	19,245	10.7	335.0	150.01	41,929,900	
November	26	30	5,637,100	.....	.....	.....	134	30	43,442,200	49,079,300	4,089,900	158,200	13,183	15,617	9.9	310.2	148.41	38,399,100	
December	181	00	37,359,800	79	45	19,054,100	87	00	31,849,000	88,262,900	3,043,500	287,750	9,922	38,400	13.3	306.7	149.06	38,132,000	
Totals and averages, {	2,392	50	536,515,500	1,523	30	320,785,788	1,391	00	470,195,300	1,327,496,588	4,187,700	3,769,676	11,892	439,557	11.7	352.1	147.08	42,989,100	

TABLE VIII.—*Concluded.*
Statement of Operations at Mystic Pumping Station for the year 1897.

ENGINE NO. 4.										SUMMARY OF ENGINES 1, 2, 3 AND 4.															
1897.	Total pumping time.		Amount pumped.		Daily average pumped.		Amount of coal consumed.		Daily average consumed.		Amount of ashes and clinkers.		Per cent. of ashes and clinkers.		Quantity pumped per lb. of coal. No correction for heating or lighting.		Average lift.		Duty in ft.-lbs. per 100 lbs. of coal. No correction for heating or lighting.		Total amount pumped.		Daily average amount pumped.		Remarks.
	Hrs.	Min	Gallons.	Gallons.	Gallons.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Per cent.	Galls.	Feet.	Ft.-Lbs.	Gallons.	Gallons.	Gallons.	Gallons.						
Month.																									
January...	653	15	291,174,770	10,040,500	330,000	11,379	42,600	12.9	882.3	149.10	109,719,400	450,547,770	14,533,800								450,547,770	14,533,800			
February..	656	45	292,063,300	10,430,800	320,500	11,768	41,971	12.7	886.4	148.74	109,955,000	411,507,300	14,696,700								411,507,300	14,696,700			
March	349	15	155,325,700	9,136,800	175,500	10,324	22,273	12.7	885.0	148.36	109,508,800	447,204,800	14,426,000								447,204,800	14,426,000			
April	486	30	216,626,900	9,846,700	247,500	11,250	34,543	14.0	875.3	148.51	108,407,500	413,004,700	13,766,800								413,004,700	13,766,800			
May	635	00	281,592,000	9,386,400	314,600	10,487	42,144	13.4	895.1	148.04	110,511,300	405,634,100	13,085,000								405,634,100	13,085,000			
June.....	704	00	312,115,400	10,403,800	352,000	11,733	33,214	9.4	886.7	147.79	109,290,800	364,896,588	12,163,200								364,896,588	12,163,200			
July	707	45	313,243,320	10,104,600	354,500	11,436	30,414	8.6	883.6	150.21	110,695,600	393,123,320	12,681,400								393,123,320	12,681,400			
August....	727	15	321,856,786	10,382,500	348,472	11,241	32,434	9.3	923.6	150.48	115,915,000	369,469,286	11,918,400								369,469,286	11,918,400			
September.	676	30	298,959,404	10,308,900	324,750	11,198	31,556	9.7	920.6	150.66	115,671,700	357,601,004	11,920,000								357,601,004	11,920,000			
October....	545	15	240,431,600	8,904,900	269,700	9,989	24,300	9.0	891.5	149.75	111,338,000	300,554,700	9,695,300								300,554,700	9,695,300			
November.	503	15	220,666,640	7,881,700	257,405	9,193	25,177	9.8	857.3	149.39	106,818,500	269,765,940	8,992,200								269,765,940	8,992,200			
December..	676	45	300,653,200	9,698,500	347,500	11,210	45,627	13.1	865.2	149.89	108,155,800	388,916,100	12,545,700								388,916,100	12,545,700			
Totals & averages. }	7,321	30	3,244,729,020	9,743,900	3,651,427	10,965	406,153	11.1	888.6	149.24	110,073,400	4,572,225,608	12,526,700								4,572,225,608	12,526,700			

TABLE IX.

Statement of Operations at the East Boston Pumping Station for the Year 1897.

1897.	ENGINES NOS. 1 AND 2.				ENGINE NO. 3.				Total amount of coal consumed.	Per cent. of ashes and clinkers.
	Total pumping time.		Total amount pumped to Reservoir.	Daily average.	Total pumping time.		Total amount pumped to tank.	Daily average.		
Month.	Hrs.	M.	Gallons.	Gallons.	Hrs.	M.	Gallons.	Gallons.	Lbs.	Per cent.
January...	394	30	17,596,200	567,600	110	15	1,689,100	54,500	55,930	20.4
February..	341	45	15,289,100	546,000	102	45	1,549,500	55,300	49,750	20.3
March	328	45	14,373,800	463,700	105	00	1,474,600	47,600	43,170	20.5
April	304	00	13,392,400	446,400	102	00	1,426,900	47,600	38,050	20.1
May	300	00	13,017,600	419,900	124	00	1,824,900	58,900	40,350	20.2
June	288	15	12,564,300	418,800	121	30	1,751,300	58,400	39,250	19.7
July	313	30	13,415,900	432,800	140	30	2,174,300	70,100	41,320	20.5
August....	299	45	12,762,700	411,700	141	45	2,256,000	72,800	41,000	20.6
September,	293	15	12,512,200	417,100	126	00	2,050,700	68,400	40,660	20.3
October....	321	15	13,699,800	441,900	122	15	1,968,900	63,500	44,810	20.3
November,	284	00	11,593,000	386,400	134	00	2,073,000	69,100	44,530	20.4
December,	324	45	13,027,500	420,200	152	30	2,306,600	74,400	52,900	20.3
Tot's and } averages. }	3,793	45	163,244,500	447,200	1,482	30	22,546,700	61,800	531,720	20.3

TABLE X.

Statement of Operations at the West Roxbury Pumping Station for the Year 1897.

1897.	Total pumping time.		Total amount pumped.	Daily average amount pumped.	Quantity pumped per lb. of coal.	Total amount of coal consumed.	Per cent. of ashes and clinkers.	Average lift.
Month.	Hours.	Min.	Gallons.	Gallons.	Gallons.	Lbs.	Per cent.	Feet.
January....	694	00	8,317,200	268,300	165.3	50,325	18.3	144.18
February ..	641	30	7,630,900	272,500	158.3	48,200	20.7	145.26
March.....	709	00	8,403,200	271,100	161.9	51,900	19.0	146.61
April.....	676	30	8,024,900	267,500	164.7	48,725	19.6	148.32
May.....	713	00	8,528,000	275,100	163.9	52,025	18.8	150.95
June.....	683	30	8,654,500	288,500	163.7	52,875	19.6	153.48
July.....	701	30	10,163,300	327,800	172.7	58,850	17.9	158.13
August....	652	00	9,088,800	293,200	169.8	53,525	17.1	155.49
September..	623	00	9,109,500	303,700	175.5	51,900	16.7	153.91
October	658	30	8,849,800	285,500	170.2	52,000	17.1	154.24
November..	627	00	7,987,800	266,300	164.2	48,650	17.9	152.18
December..	655	00	8,640,700	278,700	167.0	51,750	17.5	155.02
Tot'ls and Averages. }	8,034	30	103,398,600	183,300	166.6	620,725	18.3	151.48

TABLE XI.

Rainfall in Inches and Hundredths on Sudbury River Water-shed for the Year 1897.

1897.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1.....			0 045									
2.....								0.050	0.635			
3.....			0.380		1.140						2.565	0.055
4.....					0 175							
5.....	1.080		0.330	0.175				1.250				0.380
6.....				0.035		0.440						
7.....		0.740										
8.....		0.045										0.145
9.....				2.005							0.820	
10.....			0.070			2.270						
11.....					0.645		0.045	0.040	0.065	0.060		
12.....		1.120	0.325							0.375	1.565	0.415
13.....					0.940	0.320			0.040			
14.....			0.460			0.040	0.945					
15.....				0.235	0.010							3.070
16.....		0.085						0.660	0.070		0.195	
17.....				0.205							0.100	0.020
18.....	0.410						0.035	0.115				
19.....							0.115					
20.....						0.290			1.145		0.255	0.230
21.....	0.730	0.140	0.910		0.170		0.010			0.025		
22.....	0.075						1.780	0.430				
23.....		0.780					0.065				0.250	
24.....			1.140				0.900	0.965	0.850			
25.....					0.690	0.185	0.045				0.025	
26.....				0.060					0.130			0.180
27.....											0.455	
28.....	1.710			0.105	0.075							
29.....							1.425				0.175	0.110
30.....						0.910						
31.....					0.525		0.080			0.010		0.600
Totals...	4.005	2.910	3.660	2.820	4.370	4.455	5.445	3.510	2.935	0.470	6.405	5.205

Total rainfall during the year, 46.190 inches, being an average of two gauges located at Framingham and Ashland.

TABLE XII.

Rainfall in Inches and Hundredths at Lake Cochituate for the Year 1897.

1897.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1.....												
2.....			0.120						0.540			
3.....			0.280		0.870						2.470	0.060
4.....					0.400							
5.....	1.220		0.360			0.540		0.810			0.110	0.350
6.....				0.200								
7.....		0.660										
8.....		0.030		0.490								0.150
9.....								0.070			0.840	
10.....			0.090	1.410	0.650	1.670						
11.....							0.040	0.050	0.050	0.420		
12.....		1.180	0.320							0.420	1.610	0.370
13.....					0.890	0.250			0.100			
14.....			0.440			0.010	0.820					
15.....				0.270		0.180						2.850
16.....		0.070						0.630	0.220		0.300	
17.....				0.210			0.030					0.040
18.....	0.390							0.150				
19.....												
20.....		0.180	0.850			0.300			0.810		0.240	0.200
21.....	0.700				0.190					0.050		
22.....	0.080						1.540	0.750			0.270	
23.....		0.740					0.130					
24.....			1.140				0.870	0.800	0.750			
25.....				0.060	0.730	0.390	0.020				0.050	0.190
26.....									0.090			
27.....											0.390	
28.....	1.840			0.140								
29.....					0.060		1.280				0.190	0.110
30.....						0.940						
31.....					0.460		0.070					0.490
Totals.	4.230	2.860	3.600	2.780	4.250	4.280	4.800	3.260	2.560	0.890	6.470	4.810

Total rainfall during the year 44.790 inches.

TABLE XIII.

Rainfall in Inches and Hundredths on Mystic Lake Water-shed for the Year 1897.

1897.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1.....												
2.....			0.350				0.050	0.050	0.675			
3.....											2.260	
4.....					1.385	0.235		0.310				
5.....	1.185		0.315	0.235		0.520		0.535			0.080	0.510
6.....				0.060								
7.....		0.550								0.025		
8.....				0.405								0.290
9.....		0.025		1.355							0.840	
10.....			0.085			2.825		0.025				0.015
11.....				0.020	0.700		1.045	0.040	0.040			
12.....			0.310							0.245	1.800	0.230
13.....		1.070			0.690		0.375		0.485			
14.....			0.450			0.390	0.105					
15.....						0.040		0.280				2.255
16.....		0.090		0.410	0.040			0.390	0.165			
17.....				0.220				0.060			0.175	
18.....	0.245		0.010					0.250				0.025
19.....												
20.....						0.405	0.275		1.025		0.245	0.125
21.....	0.615	0.045	0.760		0.195					0.120		
22.....							0.720	0.445				
23.....	0.075	0.715			0.520				0.230		0.390	
24.....			1.020				0.380	1.055	0.265			
25.....					0.470	0.065	0.015					
26.....							0.040		0.220			0.300
27.....											0.435	
28.....	1.760			0.150	0.240							
29.....					0.220						0.090	
30.....						1.205	1.570					0.095
31.....					0.475		0.215					0.515
Totals.	3.880	2.495	3.300	2.855	4.935	5.685	3.790	3.440	3.105	0.390	6.315	4.360

Total rainfall during the year, 4.455 inches, being an average of two gauges located at Mystic Lake and Mystic Reservoir.

TABLE XIV.

Monthly Rainfall in Inches, during 1897, at Various Places in Eastern Massachusetts.

PLACE.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Framingham.....	4.14	2.85	3.43	2.85	4.46	4.44	5.34	2.95	2.51	0.41	6.45	5.06	44.89
Dam 4, Ashland.....	3.87	2.97	3.80	2.79	4.28	4.47	5.55	4.07	3.36	0.53	6.36	5.35	47.49
Cordaville.....	3.93	2.93	4.30	2.76	4.43	5.64	4.10	3.96	3.15	0.36	6.77	5.78	48.11
Lake Cochituate.....	4.23	2.86	3.60	2.78	4.25	4.28	4.80	3.26	2.56	0.89	6.47	4.81	44.79
Chestnut Hill.....	4.09	2.79	3.08	3.23	4.40	4.53	4.38	4.68	3.22	0.53	6.74	4.50	46.17
Mystic Lake.....	3.81	2.62	3.34	3.11	5.05	5.82	4.24	3.35	3.26	0.44	6.74	4.80	46.58
Winchester.....	3.95	2.37	3.26	2.60	4.82	5.55	3.34	3.53	2.95	0.34	5.89	3.92	42.52
Mystic Pumping Station.....	3.41	2.56	3.18	3.10	4.84	5.74	3.17	4.05	3.16	0.44	6.90	4.79	45.34
Boston Pipe-yard.....	3.06	2.92	2.64	3.08	3.55	4.20	4.38	4.51	3.29	0.30	6.74	5.14	43.81
Cambridge Observatory.....	4.01	2.53	2.92	2.70	3.78	5.98	4.06	4.47	3.00	0.40	6.45	3.47	43.77
Waltham, Boston Manufacturing Company.....	4.16	2.64	3.44	2.79	4.64	5.18	3.70	3.54	2.45	0.23	6.76	4.33	43.86
Lowell, Locks and Canals Company.....	4.35	2.96	4.14	2.25	4.94	6.11	4.62	5.63	3.04	0.59	6.49	5.32	50.44
Average of above twelve places.....	3.92	2.75	3.44	2.84	4.45	5.16	4.31	4.00	3.00	0.45	6.56	4.77	45.65

TABLE XV.

Table Showing the Temperature of Air and Water of Various Stations on the Water-works.

1897.	TEMPERATURE OF AIR.						TEMPERATURE OF WATER.	
	Chestnut Hill Reservoir.			Framlingham.			Brookline Reservoir.	Mystic Engine-House.
	Maximum.	Minimum.	Mean.	Maximum.	Minimum.	Mean.	Mean.	Mean.
January	58.0	0.5	27.5	56.0	-3.0	27.1	37.1	37.0
February	50.0	1.0	28.7	49.0	-2.0	28.4	37.1	36.8
March.....	57.0	3.5	35.9	62.0	3.0	37.2	38.3	36.7
April.....	83.0	19.0	49.4	84.0	20.0	51.0	48.3	45.1
May	80.5	36.5	58.5	83.0	35.0	60.2	59.3	59.1
June	87.0	42.5	62.6	87.0	43.0	63.6	64.8	64.3
July	94.0	52.0	72.5	94.0	53.0	73.9	73.8	73.9
August	87.0	47.0	69.1	85.0	45.0	68.1	72.3	72.6
September.....	93.0	35.0	62.6	92.0	35.0	62.3	68.3	67.7
October.....	87.0	23.5	53.3	87.0	21.0	51.9	58.1	56.6
November	67.5	6.5	40.5	65.0	8.0	40.2	46.3	46.4
December.....	62.0	-1.0	31.8	60.0	-3.0	32.0	38.2	38.6

TABLE XVI.
Rainfall, in Inches, on Cochituate Water-shed, 1863 to 1897.

YEAR.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Totals.	4 months, Ju y-Oct.
1863.....	4.10	4.38	3.57	11.34	2.66	1.98	14.12	5.61	3.39	4.56	8.54	5.05	69.30	27.68
1864.....	3.37	0.98	8.44	4.02	2.84	0.58	1.06	3.56	1.52	6.50	5.45	4.28	42.60	12.64
1865.....	4.99	4.45	5.48	2.18	8.25	0.91	3.10	3.36	1.65	6.99	4.78	3.31	49.46	15.11
1866.....	1.44	5.80	3.92	1.94	6.46	4.80	13.35	3.98	8.36	3.43	4.52	4.32	62.32	29.12
1867.....	2.76	5.40	5.65	2.43	6.46	2.95	5.36	12.36	1.08	7.27	2.63	1.90	56.25	26.07
1868.....	3.70	1.18	2.51	5.61	8.12	2.95	2.16	7.38	7.69	1.19	6.77	0.45	49.71	18.42
1869.....	3.71	7.07	7.52	2.57	7.59	3.68	2.63	2.34	8.49	9.50	3.26	5.98	64.34	22.96
1870.....	7.85	4.68	6.04	8.81	3.14	4.05	3.10	2.03	0.64	7.96	4.40	3.19	55.89	13.73
1871.....	1.31	2.30	5.02	2.29	5.66	5.96	2.20	3.56	1.46	5.38	7.01	3.24	45.39	12.60
1872.....	1.86	1.37	3.06	1.74	3.24	4.27	5.55	9.76	6.29	3.69	4.22	3.42	48.47	25.29
1873.....	4.24	2.43	3.98	2.69	3.24	0.38	4.08	7.17	2.62	6.11	4.54	3.95	45.43	19.98
1874.....	2.96	2.90	1.19	6.36	3.40	4.79	3.16	4.83	1.55	1.04	2.05	1.70	35.93	10.58
1875.....	2.42	3.15	3.74	3.23	3.56	6.24	3.57	5.53	3.43	4.85	4.83	0.94	45.49	17.38
1876.....	1.83	4.21	7.43	3.24	2.80	1.60	9.49	2.19	3.98	2.00	6.59	3.13	48.49	17.66
1877.....	3.19	0.53	7.79	3.24	3.73	2.64	2.77	3.35	0.46	8.14	6.94	1.02	43.80	14.72
1878.....	5.77	5.93	4.20	5.63	0.83	3.33	3.47	6.94	1.12	5.15	6.09	5.12	53.58	16.68
1879.....	2.00	3.05	3.90	4.69	1.20	4.14	3.38	6.43	1.74	0.90	2.98	3.60	38.01	12.45
1880.....	3.07	5.05	2.83	2.94	1.98	1.25	7.00	3.81	1.69	2.95	1.70	2.56	35.83	15.45

TABLE XVI.—*Concluded.**Rainfall collected, in Inches, on Cochituate Water-shed, 1883 to 1897.*

Year.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Totals.	4 months, July-Oct.
1881.....	5.56	4.43	4.79	1.71	3.18	4.83	2.78	1.13	2.13	2.87	3.85	3.83	41.09	8.91
1882.....	5.93	3.96	2.76	1.89	4.73	1.87	3.49	1.14	9.20	2.22	0.93	2.17	40.29	16.95
1883.....	2.88	3.59	1.76	2.27	3.95	1.81	2.88	0.39	1.31	5.16	2.06	3.14	31.20	9.74
1884.....	4.39	6.04	4.50	3.80	2.92	3.88	4.42	4.49	0.90	2.59	2.33	5.31	45.57	12.40
1885.....	5.25	3.98	1.09	3.71	3.46	2.96	1.73	7.01	1.63	5.26	5.26	2.32	43.66	15.63
1886.....	6.53	6.86	3.46	2.00	2.97	1.21	3.30	3.75	3.20	3.16	4.76	5.77	46.97	13.41
1887.....	5.29	5.34	5.10	4.45	1.02	2.58	3.77	3.70	1.28	2.49	2.76	3.80	41.58	11.24
1888.....	4.13	3.55	5.60	2.51	4.63	2.07	1.67	6.32	8.81	4.95	7.03	5.66	56.93	21.75
1889.....	5.46	1.56	2.28	3.19	3.64	3.17	9.10	4.57	4.92	3.85	5.79	2.70	50.23	22.44
1890.....	2.34	3.21	7.35	2.51	5.31	1.78	2.31	3.34	6.47	10.11	1.24	5.26	51.23	22.23
1891.....	6.67	5.02	5.49	3.62	1.67	3.78	2.99	4.91	2.12	4.14	2.84	3.17	46.42	14.16
1892.....	4.78	2.80	4.12	0.78	5.46	3.23	3.47	3.79	2.87	1.42	5.14	1.13	39.04	11.55
1893.....	2.61	7.26	3.13	3.21	5.45	2.75	2.40	5.86	1.76	3.74	2.08	5.03	45.28	13.76
1894.....	3.95	3.89	1.16	3.27	3.70	1.61	3.61	2.57	2.27	5.14	3.53	4.38	39.08	13.59
1895.....	3.93	1.70	3.11	5.03	2.03	3.12	4.71	3.96	2.77	9.57	6.32	2.71	48.96	21.01
1896.....	2.43	6.70	5.20	1.60	2.27	3.04	2.22	2.43	8.21	3.53	3.00	2.15	42.78	16.39
1897.....	4.23	2.86	3.60	2.78	4.25	4.28	4.80	3.26	2.56	0.89	6.47	4.81	44.79	11.51
Totals.....	136.93	136.61	150.77	123.28	135.80	104.47	149.20	156.81	119.58	158.70	152.69	120.55	1,645.39	584.29
Averages....	3.91	3.90	4.31	3.52	3.88	2.98	4.26	4.48	3.42	4.53	4.36	3.44	47.01	16.69

TABLE XVII.
Rainfall collected, in Inches, on Cochituate Water-shed, 1863 to 1897.

YEAR.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Totals.	4 months, July-Oct.
1863	1.93	3.11	3.71	4.42	1.44	0.67	2.97	1.51	0.98	1.32	2.65	2.17	26.88	6.78
1864	2.39	1.56	4.05	2.65	1.62	0.49	0.41	0.68	0.49	1.43	1.25	1.33	18.35	3.01
1865	2.15	1.74	4.66	2.70	4.70	0.34	0.46	0.47	0.45	0.70	1.00	1.13	20.50	2.08
1866	0.73	2.84	1.76	1.63	1.29	1.10	1.20	0.64	1.34	0.93	0.99	1.56	16.01	4.11
1867	1.10	5.24	3.50	2.87	2.20	0.65	0.59	2.10	0.31	1.02	1.10	1.12	21.80	4.02
1868	1.22	1.12	3.84	3.48	6.17	1.59	0.45	1.18	1.85	0.95	1.96	1.17	24.98	4.43
1869	1.82	1.84	3.31	2.49	2.20	1.07	0.74	0.58	1.10	2.37	1.30	3.17	21.99	4.79
1870	4.71	3.93	3.38	6.87	1.66	0.97	0.53	0.41	0.86	1.11	0.88	0.77	26.08	2.91
1871	1.03	2.28	2.53	1.58	2.00	0.87	0.43	0.85	0.39	0.69	1.30	1.21	15.16	2.36
1872	1.15	0.93	1.41	3.08	1.10	1.49	0.14	1.32	1.70	1.69	2.00	1.21	17.22	4.85
1873	3.09	1.57	3.89	6.09	2.66	0.45	0.62	1.40	0.78	2.04	1.86	2.68	27.13	4.84
1874	3.55	2.19	1.84	3.19	2.78	1.96	0.95	0.92	0.53	0.52	0.58	0.51	19.52	2.92
1875	0.13	1.92	2.66	3.15	1.39	1.48	0.25	0.62	0.60	1.19	1.96	1.22	17.57	2.66
1876	1.09	1.78	5.19	4.20	1.43	0.51	0.84	0.29	0.83	0.49	1.85	0.99	19.54	2.50
1877	1.20	1.37	6.81	3.24	2.04	0.92	0.65	0.67	0.46	1.16	2.69	1.96	23.17	2.94
1878	3.25	3.97	5.40	2.86	1.66	0.76	0.47	0.84	0.29	0.73	2.07	4.04	26.34	2.33
1879	1.29	2.32	3.30	4.48	1.40	0.77	0.33	0.95	0.61	0.60	0.72	1.04	17.81	2.49
1880	1.47	2.24	1.79	1.57	0.44	0.06	0.33	0.32	0.24	0.49	0.83	0.61	10.30	1.29

TABLE XVII.—*Concluded.*
Rainfall collected, in Inches, on Cochituate Water shed, 1863 to 1897.

YEAR.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Totals.	4 months, July-Oct.
1881	1.19	2.23	5.66	1.79	1.26	1.31	0.16	0.09	0.23	0.18	0.84	1.40	16.34	0.66
1882	1.84	3.00	3.67	0.93	1.55	0.62	0.06	0.07	0.97	0.84	0.58	0.92	15.05	1.94
1883	0.84	1.59	2.04	1.66	1.26	0.07	0.02	0.07	0.62	0.59	0.41	0.94	10.11	1.30
1884	1.84	2.86	4.67	4.00	1.39	0.67	0.26	0.61	0.13	0.34	0.62	1.82	19.21	1.34
1885	1.90	2.00	2.21	2.36	1.61	0.43	0.00	0.33	0.25	0.79	2.05	1.64	15.57	1.37
1886	2.28	7.93	3.51	2.52	1.09	0.18	0.25	0.14	0.30	0.42	1.20	2.10	21.92	1.11
1887	4.06	4.34	4.70	3.36	1.85	0.82	0.72	1.33	0.64	0.49	0.70	0.96	23.47	3.18
1888	1.13	2.77	4.76	3.45	2.37	0.53	0.47	0.94	2.31	2.57	4.21	5.46	30.97	6.29
1889	4.50	1.85	2.08	2.17	1.20	1.18	1.63	3.43	1.79	1.91	2.95	3.26	27.95	8.76
1890	1.92	2.04	5.87	2.23	1.85	1.41	0.33	0.46	1.40	3.40	1.49	2.11	24.51	5.59
1891	6.26	6.62	8.03	4.31	0.88	0.77	0.50	0.72	0.76	0.79	0.83	1.60	32.07	2.77
1892	3.18	1.64	3.12	0.90	2.03	0.49	0.33	0.56	0.60	0.57	1.09	0.84	15.35	2.06
1893	0.64	2.55	4.12	2.42	1.83	0.75	0.38	0.77	0.42	1.09	1.00	1.68	17.65	2.66
1894	1.27	1.69	2.55	2.15	0.91	0.45	0.38	0.41	0.46	0.66	0.92	1.14	12.99	1.91
1895	1.58	0.75	3.50	3.35	0.97	0.40	0.55	0.50	0.69	1.97	3.51	2.40	20.17	3.71
1896	1.72	3.69	5.52	2.01	0.62	0.71	0.37	0.47	1.03	1.28	1.39	1.30	20.14	3.15
1897	1.64	1.65	3.22	1.85	1.39	1.19	0.75	0.63	0.46	0.43	1.69	2.16	17.05	2.27
Totals.....	71.09	92.15	132.26	102.01	61.74	28.14	19.52	27.19	26.92	37.75	52.47	59.62	710.87	111.38
Averages	2.03	2.63	3.78	2.91	1.76	1.80	0.56	0.78	0.77	1.08	1.50	1.70	20.31	3.18

TABLE XVIII.
Percentage of Rainfall collected on Cochituate Water-shed, 1863 to 1897.

YEAR.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Yearly.	4 months, July-Oct.
1863	47.0	71.0	104.0	39.0	54.0	34.0	21.0	27.0	29.0	29.0	31.0	43.0	38.8	24.5
1864	71.0	159.0	48.0	66.0	57.0	84.0	39.0	19.0	32.0	22.0	23.0	31.0	43.0	23.8
1865	43.0	39.0	85.0	124.0	57.0	37.0	15.0	14.0	27.0	10.0	21.0	34.0	41.4	13.8
1866	51.0	49.0	45.0	84.0	20.0	23.0	9.0	16.0	16.0	27.0	22.0	36.0	25.7	14.1
1867	40.0	97.0	62.0	118.0	34.0	22.0	11.0	17.0	29.0	14.0	42.0	59.0	38.7	15.4
1868	33.0	95.0	153.0	62.0	76.0	54.0	21.0	16.0	24.0	80.0	29.0	261.0	50.2	24.9
1869	49.0	26.0	44.0	97.0	29.0	29.0	28.0	25.0	13.0	25.0	40.0	53.0	34.2	20.9
1870	60.0	84.0	56.0	78.0	53.0	24.0	17.0	20.0	134.0	14.0	20.0	24.0	46.7	21.2
1871	79.0	99.0	50.4	68.8	35.3	14.6	19.6	23.8	26.8	12.8	18.5	37.4	33.4	18.7
1872	61.8	67.8	46.0	177.3	33.8	34.8	2.6	13.5	27.0	45.7	47.4	35.3	35.5	19.2
1873	72.9	64.8	97.8	226.4	82.2	119.1	15.1	19.5	29.8	33.4	40.9	67.9	59.8	24.2
1874	120.0	75.5	154.7	50.2	81.7	40.8	30.0	19.1	34.3	50.3	28.4	29.9	54.3	27.6
1875	5.5	92.8	71.2	97.5	39.9	23.7	7.1	11.2	17.4	24.6	40.5	129.8	38.6	15.3
1876	59.3	42.4	69.9	129.7	50.9	31.6	8.9	13.3	22.2	24.3	28.1	31.5	40.3	14.2
1877	37.6	258.9	87.4	100.0	54.6	34.8	23.3	19.6	99.8	14.3	38.8	192.5	52.9	20.0
1878	56.3	66.9	128.6	50.7	200.0	23.2	13.5	12.0	25.8	14.3	34.0	78.8	49.2	14.0
1879	64.4	76.3	84.5	95.6	117.0	18.6	9.7	14.7	35.0	66.5	24.2	28.9	46.9	20.0
1880	47.9	55.3	63.3	53.3	22.2	4.5	4.7	6.1	14.3	16.6	48.9	23.8	28.7	8.3

TABLE XVIII.—*Concluded.*
Percentage of Rainfall collected on Cochituate Water-shed, 1863 to 1897.

YEAR.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Totals.	4 months, July-Oct.
1881.....	21.5	50.3	118.1	104.8	39.6	27.0	5.8	7.6	10.8	6.4	21.8	36.7	39.8	7.4
1882.....	31.0	75.9	133.0	49.3	32.8	33.1	1.7	6.2	10.5	37.9	62.4	42.3	37.4	12.1
1883.....	29.2	44.3	115.8	73.1	31.9	3.7	0.6	18.6	47.4	11.5	20.0	29.8	32.4	13.3
1884.....	41.8	47.4	103.9	105.1	47.5	17.3	5.0	13.6	14.9	13.1	26.7	34.2	42.2	10.8
1885.....	36.1	50.2	202.7	63.6	46.7	14.4	0.0	4.8	15.5	15.0	39.0	70.7	35.7	8.8
1886.....	36.6	107.3	101.9	154.3	43.0	35.5	11.1	7.8	10.7	13.4	21.7	29.7	49.7	8.3
1887.....	60.2	80.8	72.0	81.3	112.0	47.3	13.2	27.1	32.0	18.7	23.4	25.6	47.8	28.3
1888.....	27.5	78.0	85.0	137.3	51.2	25.8	28.1	14.9	36.2	51.9	59.9	96.4	54.4	28.9
1889.....	82.5	118.7	91.5	68.1	32.9	37.1	17.9	75.0	36.4	49.6	50.9	120.9	55.6	39.0
1890.....	82.0	63.4	79.9	88.9	34.9	79.1	14.2	13.9	21.6	33.7	120.0	40.2	47.9	25.1
1891.....	93.8	131.9	146.3	119.1	52.8	20.4	16.7	14.7	35.9	19.0	29.2	50.5	69.1	19.6
1892.....	66.6	58.5	75.7	115.5	37.1	15.3	9.5	14.7	21.1	40.2	21.2	71.1	39.3	17.8
1893.....	24.5	35.1	131.7	75.7	33.5	27.2	15.9	13.2	23.9	28.8	48.4	33.4	39.0	19.3
1894.....	32.3	43.5	219.7	65.8	24.6	27.9	10.4	16.1	20.0	12.8	26.1	26.1	33.3	14.1
1895.....	40.1	44.2	112.4	66.5	47.8	13.0	11.8	12.6	25.0	20.6	55.5	88.6	41.2	17.5
1896.....	70.9	55.0	106.2	125.8	27.5	23.5	16.9	19.4	12.5	36.4	46.5	60.6	47.1	21.3
1897.....	38.7	57.8	89.4	66.5	32.8	27.8	15.7	19.2	17.8	48.6	26.0	44.8	38.1	25.3
Totals.....	1,814.0	2,062.0	3,436.0	3,278.2	1,826.2	1,128.1	490.9	606.2	1,018.6	981.4	1,276.4	2,098.5	1,508.3	656.1
Averages....	51.8	76.1	98.2	93.7	52.2	32.2	14.0	17.3	29.1	28.0	36.5	60.0	43.1	18.7

TABLE XIX.
Rainfall, in Inches, on Sudbury-river Water-shed, 1875 to 1897.

YEAR.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Totals.	4 months, July-Oct.
1875.....	2.420	3.150	3.740	3.230	3.560	6.240	3.570	5.530	3.430	4.850	4.830	0.940	45.490	17.380
1876.....	1.830	4.210	7.430	4.197	2.763	2.040	9.134	1.730	4.614	2.241	5.764	3.620	49.563	17.709
1877.....	3.216	0.739	8.357	3.435	3.702	2.425	2.951	3.682	0.323	8.515	5.803	0.870	44.018	15.471
1878.....	5.632	5.973	4.689	5.790	0.956	3.884	2.971	6.937	1.291	6.417	7.024	6.367	57.931	17.616
1879.....	2.478	3.592	5.110	4.716	1.579	3.789	3.933	6.509	1.878	0.809	2.682	4.344	41.419	13.129
1880.....	3.568	3.980	3.315	3.105	1.836	2.138	6.273	4.008	1.603	3.740	1.785	2.828	38.177	15.024
1881.....	3.538	4.946	3.730	2.000	3.511	5.395	2.350	1.358	2.617	2.955	4.091	3.958	44.169	9.280
1882.....	3.951	4.546	2.649	1.824	5.066	1.064	1.769	1.697	8.741	2.074	1.147	2.296	39.394	14.251
1883.....	2.810	3.865	1.780	1.845	4.185	2.400	2.680	0.735	1.520	5.600	1.810	3.550	32.780	10.535
1884.....	5.085	6.845	4.720	4.405	3.470	3.445	3.665	4.630	0.785	2.480	2.645	5.170	47.135	11.650
1885.....	4.710	3.865	1.070	3.605	3.485	3.445	1.425	7.185	1.425	3.665	6.035	2.720	43.545	13.130
1886.....	6.305	6.280	3.610	2.224	2.995	1.465	3.265	4.100	2.905	2.835	4.975	4.975	46.065	13.305
1887.....	5.200	4.780	6.020	4.205	1.165	2.650	3.700	5.280	1.320	4.990	3.880	3.880	42.705	13.195
1888.....	4.150	3.685	6.065	2.425	4.825	2.535	1.405	6.225	8.585	7.224	2.670	5.395	57.465	21.205
1889.....	5.370	1.655	7.365	3.410	2.945	2.800	8.940	4.175	4.605	4.255	6.290	3.140	49.860	21.975
1890.....	2.530	3.505	6.475	2.645	5.210	2.630	2.460	3.805	6.000	10.510	1.200	5.310	53.000	22.835
1891.....	7.020	5.235	7.735	3.905	2.010	3.770	3.395	4.725	2.380	3.830	3.090	3.685	49.520	14.330
1892.....	5.830	3.140	4.060	0.830	5.585	2.760	4.230	4.440	2.840	1.170	5.800	1.125	41.830	12.680
1893.....	2.925	8.195	3.670	3.605	6.610	2.380	2.570	5.415	1.735	4.065	2.195	4.860	48.225	13.785
1894.....	4.090	3.910	1.435	3.415	4.235	1.155	3.255	2.030	2.635	5.345	3.425	4.810	39.740	13.265
1895.....	4.060	1.395	2.980	5.250	2.020	2.770	5.040	4.150	2.300	10.680	6.625	3.350	50.620	22.170
1896.....	2.330	7.180	5.235	1.570	2.575	3.290	2.510	2.395	7.720	3.765	3.020	2.125	43.705	16.390
1897.....	4.105	2.910	3.660	2.820	4.370	4.455	5.445	3.510	2.935	0.470	6.405	5.265	46.190	12.360
Totals.....	97.211	96.951	100.765	74.517	78.658	68.275	86.996	94.291	74.257	99.926	96.206	84.523	1,052.636	355.470
Averages.....	4.227	4.215	4.381	3.240	3.420	2.968	3.782	4.100	3.229	4.344	4.185	3.675	45.767	15.455

TABLE XX.

Rainfall collected, in Inches, on Sudbury-river Water-shed, 1875 to 1897.

YEARS.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Totals.	¹ / ₄ months, July-Oct.
1875.....	0.184	2.411	2.862	5.263	2.119	1.501	0.573	0.706	0.358	1.152	2.248	1.041	20.418	2.789
1876.....	1.147	2.282	7.911	5.683	2.031	0.383	0.326	0.723	0.318	0.417	1.878	0.809	23.908	1.764
1877.....	1.174	1.529	8.586	4.132	2.482	1.031	0.360	0.216	0.103	1.127	2.447	2.300	25.487	1.806
1878.....	3.228	3.972	6.256	2.807	2.487	0.873	0.229	0.848	0.277	0.921	2.922	5.067	30.487	2.275
1879.....	1.249	2.756	4.156	5.379	1.987	0.713	0.281	0.705	0.243	0.126	0.825	0.825	18.775	1.355
1880.....	2.000	2.982	2.451	2.017	0.917	0.303	0.315	0.212	0.138	0.181	0.354	0.312	12.182	0.846
1881.....	0.740	2.491	7.142	2.669	1.721	2.309	0.493	0.204	0.340	0.331	0.682	1.383	20.565	1.428
1882.....	2.213	3.872	5.064	1.497	2.304	0.913	0.154	0.099	0.529	0.534	0.302	0.561	18.102	1.316
1883.....	0.597	1.664	2.873	2.330	1.673	0.518	0.206	0.140	0.157	0.331	0.354	0.345	11.188	0.834
1884.....	1.775	4.742	6.752	4.925	1.838	0.719	0.399	0.458	0.076	0.148	0.302	2.094	23.784	1.081
1885.....	2.203	2.182	2.805	3.133	2.983	0.735	0.111	0.429	0.209	0.599	2.033	1.611	18.916	1.348
1886.....	2.606	7.734	3.672	3.361	1.285	0.350	0.206	0.168	0.260	0.260	1.161	1.819	22.825	0.887
1887.....	4.619	4.693	5.116	4.592	1.709	0.714	0.204	0.382	0.191	0.339	0.636	1.147	24.227	1.116
1888.....	1.878	3.255	5.775	4.566	2.912	0.728	0.209	0.677	1.394	3.566	4.761	5.428	35.749	6.446
1889.....	4.963	1.926	2.388	2.434	1.569	1.128	1.130	2.354	1.422	2.194	3.351	3.997	29.056	7.300
1890.....	2.237	2.463	6.498	3.236	2.437	0.980	0.191	0.235	0.790	4.053	2.097	1.776	26.943	5.269
1891.....	3.353	5.616	7.944	4.138	1.039	0.714	0.266	0.260	0.350	0.375	0.526	0.971	27.612	1.281
1892.....	3.335	1.574	3.488	1.504	2.245	0.739	0.382	0.500	0.396	0.224	1.204	0.865	16.456	1.502
1893.....	0.773	2.485	5.789	3.668	5.143	0.759	0.252	0.322	0.187	0.395	0.550	1.421	12.774	1.186
1894.....	1.236	1.596	3.992	2.832	1.498	0.722	0.287	0.373	0.258	0.668	1.442	1.277	16.182	1.586
1895.....	1.844	0.871	4.299	4.341	1.134	0.301	0.411	0.409	0.153	2.460	4.794	3.179	24.106	3.433
1896.....	1.933	4.466	6.841	2.579	0.641	0.689	0.170	1.002	0.669	1.055	1.137	1.171	21.453	1.946
1897.....	1.507	1.718	4.575	2.615	1.632	1.661	1.174	1.053	0.315	0.168	1.570	2.827	20.815	2.710
Totals.....	48.824	69.145	117.235	79.631	45.276	19.484	8.359	11.865	9.676	21.624	37.166	42.865	511.150	51.524
Averages....	2.123	3.006	50.97	3.462	1.368	0.847	0.363	0.516	0.421	0.940	1.616	1.864	22.224	2.240

TABLE XXI.

*Percentage of Rainfall collected on Sudbury-river Water-shed,
1875 to 1897.*

YEAR.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Yearly.	4 months, July-Oct.
1875	7.6	76.5	76.5	162.9	59.5	24.0	16.0	12.8	10.4	23.8	46.5	110.7	44.9	16.0
1876	62.7	54.2	106.5	135.4	73.5	18.8	3.6	42.0	6.9	18.6	32.6	22.3	48.2	10.1
1877	36.5	206.9	102.7	120.3	67.0	42.5	12.2	5.9	31.9	13.2	42.2	264.4	57.9	11.7
1878	57.3	66.5	133.4	48.5	260.2	22.5	7.7	12.2	21.5	14.3	41.6	89.0	52.6	12.9
1879	50.4	77.4	80.9	114.1	125.8	18.8	7.1	10.8	12.9	15.6	13.2	19.0	45.3	10.3
1880	56.0	74.9	73.9	65.0	50.0	14.2	5.0	5.3	8.6	4.8	19.9	11.0	31.9	5.4
1881	13.3	53.6	124.6	133.4	49.0	42.8	21.0	19.4	13.0	11.2	16.7	34.9	46.6	15.4
1882	37.2	85.2	191.2	82.1	45.5	54.9	8.7	5.9	6.0	25.7	31.5	24.5	45.9	9.2
1883	21.2	43.0	161.4	126.3	40.0	21.6	7.7	19.1	10.4	5.9	19.5	9.7	34.1	7.9
1884	34.9	72.5	143.1	111.8	53.0	20.9	10.9	9.8	8.9	6.0	11.4	31.9	50.5	9.3
1885	46.8	56.4	262.1	86.9	68.4	25.7	7.8	6.0	14.7	11.8	33.3	77.0	43.4	8.9
1886	40.9	123.2	101.7	151.1	42.9	23.9	6.3	4.1	7.0	8.0	25.0	36.6	49.5	6.2
1887	88.8	95.3	104.4	106.0	154.5	26.9	5.5	7.2	14.5	12.0	23.8	29.6	56.7	8.5
1888	45.3	88.3	95.9	188.3	60.3	28.7	14.9	10.9	23.2	71.4	65.9	100.6	62.2	30.4
1889	92.4	116.4	100.9	71.4	53.3	40.3	12.6	61.2	30.9	51.6	53.3	127.3	58.2	33.2
1890	88.4	70.3	84.0	122.3	46.8	48.3	7.8	6.1	13.2	38.6	174.7	33.5	50.9	23.1
1891	76.7	107.3	122.7	106.0	51.7	18.9	7.8	6.1	14.7	9.8	17.0	26.3	55.8	8.9
1892	57.0	50.1	85.9	181.1	40.2	26.8	9.0	11.3	13.9	19.2	20.7	76.9	39.3	11.8
1893	26.4	30.3	157.7	101.7	77.8	31.9	11.0	5.9	10.8	9.7	25.1	29.2	45.2	8.6
1894	30.2	40.8	278.2	82.9	35.4	62.6	8.8	18.4	9.8	12.5	42.1	26.5	40.7	12.0
1895	45.4	62.5	144.2	82.7	56.1	10.8	8.2	9.9	6.7	23.0	72.4	94.9	47.8	15.5
1896	80.9	62.2	130.7	164.3	24.9	21.4	6.8	4.3	8.7	28.0	37.7	55.1	49.1	11.9
1897	37.6	59.0	125.0	92.7	37.3	37.3	21.6	30.0	10.7	35.7	24.5	54.3	45.1	21.9
Totals.	1133.9	1772.8	2987.6	2637.2	1573.1	684.5	228.0	324.6	309.3	470.4	890.6	1385.2	1101.8	309.1
Aver's.	49.3	77.1	129.9	114.7	68.4	29.8	9.9	14.1	13.4	20.5	39.0	60.2	47.9	13.5

TABLE XXII.
Rainfall, in Inches, on Mystic Water-shed, 1878 to 1897.

YEAR.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Totals.	‡ months, July-Oct.
1878.....	5.67	5.74	3.33	5.73	0.67	2.62	3.52	7.51	3.19	4.95	5.69	4.845	54.065	19.17
1879.....	1.82	2.73	3.52	4.65	1.86	3.98	2.39	5.48	1.60	0.77	2.76	3.74	35.30	10.24
1880.....	2.62	4.23	2.49	2.18	2.02	1.49	7.23	3.64	1.42	2.70	1.90	2.50	34.42	14.99
1881.....	5.82	3.63	6.69	1.54	2.98	6.84	2.60	0.67	2.17	2.16	3.52	3.29	41.91	7.60
1882.....	5.545	4.68	2.49	2.11	4.58	2.09	2.34	1.065	8.35	1.94	1.745	2.23	39.165	13.695
1883.....	2.67	3.065	2.22	2.47	3.585	1.635	2.785	0.87	1.495	5.45	1.98	2.995	31.22	10.60
1884.....	4.745	6.085	4.255	3.18	2.95	4.635	3.72	4.855	0.70	2.70	2.005	4.56	44.39	11.975
1885.....	4.83	3.40	1.175	3.445	3.945	4.41	2.04	5.90	1.425	5.52	6.31	2.10	44.50	14.885
1886.....	6.315	7.175	3.84	2.10	2.945	1.54	3.71	3.24	2.955	2.85	4.065	4.825	45.560	12.755
1887.....	5.245	4.47	5.00	4.605	1.69	2.695	6.585	4.965	1.50	3.04	3.05	3.575	46.42	16.090
1888.....	4.05	3.28	5.185	2.84	5.095	2.20	2.23	6.23	8.56	4.955	6.85	5.27	56.745	21.975
1889.....	5.505	1.86	2.285	3.61	4.64	3.315	8.455	3.92	4.705	3.59	5.65	2.86	50.395	20.67
1890.....	2.725	3.38	6.68	2.405	6.30	3.38	2.265	3.64	3.70	8.84	1.385	4.67	49.37	18.445
1891.....	6.245	5.075	6.07	3.15	2.46	4.43	3.18	3.88	2.16	4.735	2.605	3.41	47.40	13.955
1892.....	4.515	3.015	4.005	0.815	5.585	4.15	2.575	4.82	2.005	1.835	4.645	1.15	39.115	11.235
1893.....	2.26	7.50	2.55	3.37	6.26	2.10	2.04	5.41	2.01	4.10	2.25	4.35	44.20	13.56
1894.....	3.93	3.31	1.09	3.48	5.18	0.72	3.45	2.52	2.52	5.58	3.49	3.97	39.24	14.07

1895.....	3.535	0.055	3.00	4.185	3.150	3.630	4.345	5.435	2.040	10.195	7.260	2.300	48.73	22.015
1896.....	2.355	5.085	4.550	1.775	2.010	2.345	2.420	2.610	7.885	3.220	3.320	2.330	39.90	16.135
1897.....	3.880	2.495	3.300	2.855	4.935	5.685	3.790	3.440	3.105	0.390	6.315	4.360	44.350	10.725
Total.....	84.280	80.860	74.325	60.495	72.840	63.890	71.670	80.100	63.495	79.520	75.795	69.330	876.395	294.785
Averages....	4.214	4.043	3.716	3.025	3.642	3.195	3.584	4.005	3.175	3.976	3.790	3.467	43.820	14.739

TABLE XXIII.

Rainfall collected, in Inches, on Mystic Water-shed, 1878 to 1897.

YEAR.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Totals.	4 months, July-Oct.
1878	3.55	3.97	4.91	2.21	2.16	0.78	0.48	1.11	0.56	0.71	1.75	3.63	25.82	2.86
1879	1.21	2.33	3.31	3.97	1.95	0.97	0.54	0.70	0.48	0.34	0.45	0.69	16.94	2.06
1880	1.70	2.54	1.95	1.50	0.96	0.51	0.67	0.54	0.45	0.36	0.44	0.59	12.21	2.02
1881	0.82	2.14	6.79	2.17	1.51	2.05	0.87	0.35	0.31	0.29	0.50	0.87	18.67	1.82
1882	1.37	3.03	4.19	1.16	1.85	0.81	0.35	0.22	0.53	0.58	0.39	0.57	15.05	1.68
1883	0.70	1.43	1.88	1.63	1.20	0.52	0.30	0.22	0.18	0.39	0.42	0.44	9.31	1.09
1884	1.49	3.89	5.42	3.85	1.48	0.85	0.58	0.60	0.23	0.27	0.35	1.17	20.18	1.68
1885	1.79	1.81	2.05	2.03	2.18	0.86	0.47	0.54	0.34	0.68	2.41	2.39	17.55	2.03
1886	2.31	7.70	3.91	3.24	1.27	0.55	0.41	0.25	0.32	0.38	0.88	1.43	22.65	1.36
1887	3.16	3.61	3.60	3.75	1.89	1.27	0.87	1.35	0.48	0.57	0.71	0.91	22.17	3.27
1888	1.43	3.32	4.28	3.27	2.88	0.84	0.39	0.54	1.31	2.74	5.04	5.08	31.12	4.98
1889	4.51	1.83	1.60	2.27	2.18	1.89	1.33	2.05	1.06	1.21	2.49	3.06	25.48	5.65
1890	2.07	2.23	5.37	2.93	3.00	1.92	0.43	0.46	0.58	2.61	1.95	2.49	26.04	4.08
1891	6.29	5.97	7.21	3.43	1.40	1.01	0.42	0.44	0.42	0.58	0.56	0.87	28.60	1.86
1892	2.49	1.76	3.03	1.33	2.10	1.17	0.66	0.49	0.56	0.45	1.07	0.87	15.98	2.16
1893	0.75	2.14	4.52	2.72	4.42	1.04	0.47	0.69	0.41	0.55	0.71	1.27	19.69	2.12
1894	1.37	1.87	3.05	2.27	1.31	0.91	0.49	0.38	0.36	0.58	0.91	0.90	14.40	1.81
1895	1.55	0.87	3.16	2.95	1.14	0.54	0.60	0.80	0.36	1.46	2.37	2.12	17.91	3.22
1896	1.85	3.40	4.50	3.26	0.77	0.75	0.39	0.34	1.06	0.89	1.11	1.24	19.55	2.68
1897	1.40	1.40	3.46	2.15	1.83	2.19	0.50	0.95	0.41	0.39	1.02	1.96	17.64	2.25
Totals.	41.81	57.24	78.19	52.09	37.48	21.43	11.22	13.02	10.41	16.03	25.53	32.55	396.96	50.68
Averages,	2.09	2.86	3.91	2.60	1.87	1.07	0.56	0.65	0.52	0.80	1.28	1.63	19.85	2.53

TABLE XXIV.

Percentage of Rainfall collected at Mystic Water-shed, 1878 to 1897.

YEAR.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Yearly.	4 months, July-Oct.
1878.....	62.6	69.2	125.0	38.6	322.9	29.6	13.5	14.8	17.7	14.3	30.8	74.9	47.8	14.9
1879.....	66.6	85.4	93.9	85.3	104.9	24.5	22.6	12.8	29.7	44.2	16.2	18.6	48.0	20.1
1880.....	64.9	60.1	78.4	68.8	47.3	34.3	9.2	14.7	31.7	13.5	22.9	23.8	35.5	13.5
1881.....	14.2	58.9	101.5	141.1	50.7	29.9	33.3	51.9	14.1	13.6	14.3	26.3	44.5	23.9
1882.....	24.8	64.8	168.4	55.0	40.4	38.6	14.9	20.8	6.3	30.0	22.2	25.5	38.4	12.3
1883.....	26.1	46.7	84.8	65.9	33.5	31.8	10.8	25.7	12.1	7.2	21.1	14.7	29.8	10.3
1884.....	31.5	63.9	127.3	121.2	50.2	18.3	15.5	12.4	33.5	9.9	17.4	25.6	45.5	14.0
1885.....	37.1	53.3	174.5	58.8	55.3	19.6	22.8	9.2	23.7	12.2	38.2	113.6	39.4	13.6
1886.....	36.6	107.3	101.9	154.3	43.0	35.5	11.1	7.8	10.7	13.4	21.7	29.7	49.7	10.7
1887.....	60.2	80.8	72.0	81.3	112.0	47.3	13.2	27.1	32.0	18.7	23.4	25.6	47.8	20.3
1888.....	35.2	101.3	82.5	115.2	56.6	38.1	17.5	8.8	15.3	55.3	73.6	96.4	54.8	22.7
1889.....	81.8	98.2	70.2	63.0	46.9	57.0	15.8	22.2	22.5	33.7	44.1	107.0	50.6	27.3
1890.....	75.6	66.0	80.4	121.8	47.6	56.9	19.0	12.7	15.6	29.5	141.2	53.5	52.8	22.1
1891.....	100.7	117.6	118.7	109.0	57.0	22.8	13.3	11.3	19.3	12.1	21.7	25.6	60.3	13.3
1892.....	55.0	58.5	75.7	163.6	37.5	28.3	25.7	10.2	27.7	24.3	23.1	75.2	40.9	19.2
1893.....	33.3	28.6	177.3	80.7	70.6	49.5	23.2	12.6	20.5	13.4	31.5	29.1	44.5	15.6
1894.....	34.8	56.5	280.1	65.4	25.3	125.8	14.2	15.1	14.3	10.5	26.0	22.7	36.7	12.9
1895.....	43.7	132.2	105.2	70.6	36.0	15.0	13.8	14.7	17.6	14.4	37.8	92.2	36.8	15.1
1896.....	78.7	66.8	98.9	183.5	38.5	31.9	16.2	12.9	13.5	27.5	33.4	53.1	49.0	17.5
1897.....	36.0	56.1	104.7	75.1	37.0	38.5	13.1	27.6	13.1	99.2	16.2	47.1	39.8	20.9
Totals..	999.4	1472.2	2321.4	1918.2	1313.2	773.2	338.7	375.3	391.0	496.9	676.8	980.2	892.6	340.2
Averages,	49.97	73.61	116.07	95.91	65.66	38.66	16.94	18.77	19.55	24.85	33.84	49.01	44.63	17.01

1889.....	49 950	104,030,100	1,383,400	21,975	77,563,400	1,031,400	July.....	8.940	47,645,200	633,600	July 13-19	3,446,800	45,800
1890.....	53.000	96,650,400	1,285,200	22,835	55,975,600	744,400	July.....	2.400	8,064,500	107,200			
1891.....	49.520	98,865,500	1,314,700	14.330	13,608,900	181,000	July.....	3.355	11,212,900	149,100			
1892.....	41.830	58,753,000	781,300	12.680	15,957,700	212,200	October.....	1.170	9,461,300	125,800			
1893.....	48.225	77,963,300	1,036,700	13.785	12,602,400	167,600	September...	1.735	8,126,700	108,100			
1894.....	39.740	57,937,800	770,400	13.265	16,856,900	224,200	September...	2.635	11,243,300	149,500			
1895.....	50.620	86,632,900	1,152,000	22.170	36,477,200	485,100	September...	2.300	6,673,300	88,700			
1896.....	43.705	76,607,100	1,018,700	16.390	21,214,600	282,100	August.....	2.395	4,312,900	57,400			
1897.....	46.190	74,528,800	991,100	12.360	28,787,800	382,800	October.....	0.470	7,064,500	93,900			
Averages,	45.767	80,111,600	1,057,400	15.455	23,979,700	316,500							

SUMMARY OF STATISTICS.

REPORT FOR 1897.

Boston Water Works, Suffolk County, Massachusetts, supplies also the cities of Somerville, Chelsea and Everett.

Population by census of 1895 :

Boston	496,920
Chelsea	31,264
Somerville	52,200
Everett	18,573
Total	598,957

Date of Construction :

Cochituate Works	1848
Mystic	1864

By whom owned. — City of Boston.

Sources of supply. — Lake Cochituate, Sudbury river, and Mystic lake.

Mode of supply. — Sixty-five per cent. from gravity works.
 Thirty-five “ “ pumping “

PUMPING.

	COCHITUATE.	MYSTIC.
Builder of pumping machinery	Holly Mfg. Co. and Quintard Iron Works.	H. R. Worthington and G. F. Blake Mfg. Co.
Description of coal used :		
<i>a</i> Kind	Bituminous.	Bituminous.
<i>c</i> Size	Broken.	Broken.
<i>e</i> Price per gross ton, in bins	\$3.47—\$3.57	\$3.18
<i>f</i> Per cent. of ash	9.2	11.4
Coal consumed for year, in lbs.	5,157,939	7,421,103
Total pumpage for year, in gallons	5,250,063,975	4,572,225,608
Gallons pumped per lb. of coal	1017.9	616.1
Cost of pumping figured on pumping-station expenses, viz. :	\$29,905 25	\$27,989 96
Cost per million gallons raised to reservoir	\$5.706	\$6.122

	COCHITUATE.	MYSTIC.
Estimated population . . .	491,100	142,600
Estimated number of consumers,	488,100	141,600
Total consumption, gallons . .	21,121,552,400	4,569,393,100
Passed through meters . . .	4,911,650,000	826,417,500
Percentage metered	23.3	18.9
Average daily consumption, gal- lons	57,867,300	12,518,900
Gallons per day, each inhabi- tant	117.8	87.8
Gallons per day, each consumer,	118.5	88.4

DISTRIBUTION.

Mains.

	COCHITUATE.	MYSTIC.
Kind of pipe used	{ Cast Iron.	Cast Iron, Wrought Iron and Cement.
Sizes	. 48 in. to 4 in.	36 in. to 3 in.
Extended, miles	19.5	2.6
Total now in use	627.1	187.2
Distribution-pipe less than 4 in., length, miles	2.2	4.0
Hydrants added	178	79
Hydrants now in use	6,547	1,718
Stop-gates added	323	128
Stop-gates now in use	7,410	2,519

Services.

Kind of pipe used	{ Lead.	Lead and Wrought Iron.
Sizes	. $\frac{5}{8}$ in. to 6 in.	$\frac{1}{2}$ in. to 4 in.
Extended, feet	56,075	23,369
Service-taps added	2,465	906
Total now in use	75,785	25,848
Meters now in use	4,436	501
Motors and elevators in use . .	625	21

¹ BOSTON WATER BOARD.*Organized July 31, 1876.*

TIMOTHY T. SAWYER, from July 31, 1876, to May 5, 1879; and from May 1, 1882, to May 4, 1883.

LEONARD R. CUTTER, from July 31, 1876, to May 4, 1883.²

ALBERT STANWOOD, from July 31, 1876, to May 7, 1883.²

FRANCIS THOMPSON, from May 5, 1879, to May 1, 1882.²

WILLIAM A. SIMMONS, from May 7, 1883, to August 18, 1885.

GEORGE M. HOBBS, from May 4, 1883, to May 4, 1885.

JOHN G. BLAKE, from May 4, 1883, to August 18, 1885.

WILLIAM B. SMART, from May 4, 1885, to March 18, 1889.

HORACE T. ROCKWELL, from August 25, 1885, to April 25, 1888.

THOMAS F. DOHERTY, from August 26, 1885, to May 5, 1890; and from May 4, 1891, to July 1, 1895.

ROBERT GRANT, from April 25, 1888, to July 18, 1893.

PHILIP J. DOHERTY, from March 18, 1889, to May 4, 1891.

JOHN W. LEIGHTON, from May 5, 1890, to July 1, 1895.²

WILLIAM S. McNARY, from August 15, 1893, to November 5, 1894.

CHARLES W. SMITH, from January 23, 1895, to July 1, 1895.

¹ *Water Commissioners.*

CHARLES W. SMITH, from July 1, 1895, to January 20, 1896.³

JEREMIAH J. MCCARTHY (Acting), from January 20, to February 1, 1896.

JOHN R. MURPHY, from February 1, 1896, to present time.

Assistant Water Commissioners.

JEREMIAH J. MCCARTHY, from July 1, 1895, to January 20, 1896.

EDWARD C. ELLIS, from February 17, 1896, to present time.

Chief Clerk and Secretary.

WALTER E. SWAN.

General Superintendent Income Division.

JOS. H. CALDWELL.

General Superintendent Distribution Division.

HUGH McNULTY.

General Superintendent Western Division.

DESMOND FITZGERALD (to January 1, 1898.)⁴

City Engineer and Engineer of the Department.

WILLIAM JACKSON.

¹ Under Chap. 449 of the Acts of 1895, the Boston Water Board was abolished, and the Water-Supply and Water-Income Departments consolidated and placed under the charge of one Water Commissioner.

² Deceased.

³ Resigned.

⁴ Office abolished.

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ANNUAL REPORT
OF THE
WIRE DEPARTMENT
FOR THE YEAR 1897.

OFFICE OF THE COMMISSIONER OF WIRES,
OLD COURT HOUSE, BOSTON, March 1, 1898.

HON. JOSIAH QUINCY,
Mayor:

SIR: I respectfully submit my second annual report and the fourth issued since the Wire Department was established, covering the expenses incurred and the work accomplished by it from February 1, 1897, to February 1, 1898.

I must again protest against the present method of granting pole rights to the various companies and individuals seeking them from the Board of Aldermen. I do not for a moment deny the right of the Board to grant such locations, but since the law was passed giving it such right, the conditions attending the transmission of electrical energy have changed very greatly. At that time the telephone, electric light, electric motor and electric street railroad were unknown; poles and wires were erected for the transmission of messages by telegraph only, and the dangers attending the indiscriminate stringing of high and low tension wires as is done to-day were not foreseen or thought of; our streets were not made brilliant by the rays of the arc light and the dangers attending the transmission of the necessary energy thereto were unknown. To continue the practice of granting pole

locations in the streets of the city without intelligent examination, and strict supervision during the construction, by some department vested with authority to do so, is to invite dangers that can be avoided, and to expose the lives and property of our citizens by the indiscriminate stringing of wires of all kinds on the same poles or on separate poles on the same side of the streets.

I believe the law gives me the right to designate the distance between the overhead wires, cables or conductors of any person, firm or corporation, and those of any other person, firm or corporation, and in my judgment the full width of our streets is none too little distance to maintain between high and low tension wires. My reasons for assuming this position are that overhead wires will break and fall from their supports with great frequency, particularly the iron and copper wires used for telephone, telegraph and other purposes, and as they are usually placed above the electric light, power and street railway wires, they are very apt to cross the same and become far more dangerous; a broken end dangling in the air can often be as effective an executioner as a rope thrown over the limb of a tree with a noose at one end and self-constituted judges, juries and executioners at the other. As incendiaries they are nearly as expert as any professional defrauder of insurance companies.

Upon the completion of the underground system within the district prescribed by the Commissioner of Wires in any calendar year he can cause the removal of the poles and wires in the streets, but not so with the wires and fixtures on the roofs of buildings; this department has no control over these fixtures after they have been stripped of the wires they formerly supported; they are then within the control of the owner of the building or the parties who erected them, and cannot be removed without the consent of one or both of these parties. While some of the owners of these fixtures remove them when requested to do so, many others do not, but permit them to remain like spectres — all that there is to remind the people of the time when the air was filled with the throbbing pulsations of the dynamo and the minute waves set in motion by the vibrations of the diaphragm of the telephone transmitter.

While permitted to remain with or without the knowledge of the owners or occupants of the buildings to which they are attached, neglected as they must be, they are sure to become a menace to the public and the fire department in the performance of its duties, besides adding fuel to the flames in case of fire. Again, so long as these structures remain



STRUCTURES, CABLES AND WIRES ON ROOFS NEAR DEVONSHIRE STREET.



THE SAME ROOFS WITH THE LUMBER AND WIRES REMOVED

they afford a ready means of support for "tramp" wires of all kinds, and a sure temptation to people who know little, and care less, of the dangers attending poor construction of overhead circuits, or the law governing the same. For this reason these abandoned structures are a constant source of anxiety to this department; abandoned by their owners they become the prey of all kinds of electrical "pirates" who string wires on them for all purposes and in violation of all law or good practices.

When such wires are not "tagged" with the owner's name I have instructed the men of this department to cut them down. I believe the law gives me that right and this is the most direct way to put a stop to this practice, as the owners will then seek the Wire Department instead of that department seeking them as has been done heretofore.

I would suggest that an ordinance be passed authorizing this department to remove all abandoned fixtures that are not removed by the owners when notified to do so.

While it is expected that the work of placing the overhead wires within the prescribed district underground must be completed on or before the first of February of each year, yet in practice it is found impossible to do so, because the owners of such wires push the work of constructing the electric conduits and manholes during the entire portion of the year when the streets of the city can be opened for this character of work. With the beginning of the winter months this work ceases, but the work of laying service ducts continues the year round.

After the conduits are completed the wires and cables must be drawn in and spliced, and service wires and cables from the street mains to the buildings in which electric lights are used, and to lamps for street lighting connected. These different systems of wires and cables must in most cases be completed and lamps, motors, instruments, etc., connected thereto before the overhead wires which they supplant, can be disconnected from the dynamos and removed from the poles in the streets and fixtures on the housetops. Almost invariably the poles and fixtures support wires of all kinds that are owned by as many different parties, while the company owning the poles may remove theirs with reasonable promptness, other occupants of such poles and fixtures often prove very delinquent in this direction, while some of the owners of iron wire deeming it of no value often deny such ownership and in that case the task of its removal falls upon this department. All this requires time, and causes what may seem to the public unnecessary delay, but inasmuch as

the work of removing such wires within the district prescribed by the Act of 1894 is now practically finished, nearly two years before the time set by law (January 1, 1900), such apparent delay can be submitted to without serious apprehension lest the interests of the public may be neglected.

In justice to the companies and firms engaged in the transmission of electrical energy it must be said that without their hearty coöperation with this department, which they have so freely given, the important work of clearing the streets of poles and wires would not have reached the present very satisfactory stage.

With the close of the year 1899 the Wire Department would cease to exist according to the terms of the act creating it, and the department for the inspection and supervision of wires (which it absorbed) would have to be revived in compliance with chapter 404 of the Acts of 1890, had not the Legislature at its present session so amended the law of 1894, that beginning in January, 1900, the Commissioner of Wires shall cause to be removed from two miles of streets each year for ten years, poles and overhead wires and place the latter underground, in such portions of the city as he may deem best, making a total of twenty miles of streets to be cleared with the close of the year 1910. This amendment will continue the Wire Department in existence for ten years longer than the Act of 1894 contemplated.

When it is considered that the number of miles of streets cleared of wires up to the present time averaged over 7.6 per year the amount for the next ten years seems rather small, but there are several good reasons for not attempting to accomplish more within the time specified. First: The cost of the work already done within the prescribed district is very great, as it includes not only the construction of an entirely new system of electrical transmission, but the wiping out of the entire capital invested in the old one. To insist upon the removal of overhead wires at the same ratio as has been maintained up to the present time would be to impose an unreasonable burden on many of the owners thereof. Second: All of them are now convinced of the great benefits they derive from the underground system, and will continue to enlarge it as rapidly as the condition of their finances will permit, regardless of any law compelling them to do so. Third: Owing to the experience of some of the companies during the last snow storm, and for other reasons, a large amount of wire will be placed underground that will not be included in the amount prescribed each year by the Commissioner of Wires. Fourth: The removal of the overhead



VIEW FROM THE GLOBE BUILDING, SHOWING TOWERING STRUCTURES,
WIRES AND CABLES.



VIEW FROM THE SAME SPOT AFTER THE ROOFS WERE CLEARED
OF THE OBSTRUCTIONS.

wires and the placing of them underground is not by any means the most important part of the duties of the Wire Department, and its life should be prolonged for the good it has done and is now doing regardless of the underground wires.

The duty of the Fire Department is to extinguish fires when once ignited, but the duty of the Wire Department is to prevent them. Electrical energy in its generation and transmission is a source of danger to life and property unless kept within proper bounds, and it is the duty of this department to see that it is so kept.

The storm that began on January 31, and ended February 1, of the current year, brings more vividly before the minds of the public than any words of mine can, the necessity for gradually removing the overhead wires and maintaining the best form of construction possible; this was powerfully set forth by the elements on that occasion.

This was one of those snow storms that visit portions of New England occasionally, the snow clinging with the tenacity of glue to poles, fixtures and wires, bringing whole lines of the former down in the streets and in many cases rendering the same impassible. Owing to the fact that most of the large fixtures on the roofs in the prescribed district were relieved of most of the wires they formerly contained, but few of them were brought down by the weight of the snow or force of the wind.

During the night of January 31 and February 1, the temperature decreased very rapidly, and the snow-encased wires were covered with a coat of ice which nothing but a warm rain could remove. The accumulated weight of snow and ice brought down wires of all kinds in one tangled mass, the so-called harmless ones becoming equally as dangerous, and more so owing to their previous good character than their powerful neighbors.

Owing to the fact that the high potential currents with the exception of that of the Boston Elevated Railway Company were cut off at an early hour and that the severity of the storm kept all people off the streets except those whose business compelled them to be there, no fatal accidents occurred. Many horses were killed during the night of January 31, and the early morning hours of February 1, and in every case these horses were killed by the low tension wires that were harmless in themselves, but having fallen across those of high potential, their character was entirely changed. Before daylight these wires could not be seen by horses or drivers until the animals ran against them with fatal results, unless some

one was present with the necessary tools and skill to cut them free from these instruments of torture.

The number of fires caused by the crossing of electric wires during this storm was twenty-one, fourteen of which originated on the outside of buildings and seven on the inside, the current being carried over the overhead wires into the same. The loss was from a few dollars to several thousands, one building having been totally destroyed.

To the rigid enforcement by this department of that clause in chapter 404 of the Acts of 1890, section 1, which provides that "the owners of all wires other than a wire designed to carry an electric light or power current, shall attach to it at suitable and convenient points in the circuit, an appliance calculated to prevent at all times a current of electricity of such intensity or volume as to be capable of injuring electrical instruments or causing fire from entering the building by means of such wire, beyond the point at which such appliance is attached," can be attributed the small number of fires during this severe storm. Hundreds of devices of this kind proved effective in preventing the flow of dangerous currents into the buildings over wires used for the transmission of electric currents of low potential. Out of the many thousands of these devices known as "safety fuses" but three are known to this department to have failed to do that which is expected of them, viz.: prevent fires and injury to persons; proving the wisdom of the law, and more than compensating for the time and labor spent by this department in enforcing it.

With the exception of the fire-alarm telegraph and police signal systems the owners of all low tension wires are required to "fuse" them at the point where they enter buildings; the enforcement of the law and the rules of this department no doubt prevented a recurrence of the fire which occurred on Thanksgiving Day, 1889, causing the loss of many lives and much valuable property, and finally aroused public opinion to the necessity of placing all electric wires and appliances under municipal control.

This storm threw a large amount of responsibility and a vast amount of labor on this department. When it became apparent that the practical destruction of nearly all overhead circuits was assured, steps were taken to discontinue the use of high potential currents with the exception of those used for the propulsion of street cars. This exception was made, because of the necessity of keeping the snow ploughs running to keep the tracks clear of snow that was falling and drifting. Had this not been done, days if not weeks would



CITY OF BOSTON
STREETS IN WHICH UNDERGROUND CONDUITS
WERE LAID DURING THE YEAR 1897.

1897 PRESCRIBED DISTRICT SHOWN IN BLUE.

1898 PRESCRIBED DISTRICT SHOWN IN BUFF.

Thomas W. Flood
Commissioner of Wires.



have elapsed before travel by street cars could be resumed with any degree of regularity, thus causing great inconvenience and loss to the thousands who depend on this means of transportation.

That there was some risk in permitting the current to traverse over this tangled mass of metal, could not be denied, but relying on the presence and efficiency of the safety devices before mentioned to guard against fires, and knowing that the pressure maintained in the trolley and feed wires (550 volts) seldom if ever proved fatal to human beings due to shocks received therefrom, it was decided not to cut off the current from the street railway system, which decision proved a wise one, for while from fifteen to twenty horses of greater or less value were killed, no persons so far as known were even slightly injured, and when it is considered that thousands of buildings are crossed and entered by electric wires of all kinds, and that outside the underground district the fire-alarm telegraph system was rendered utterly useless and its wires and fixtures a total wreck, the loss by fire was very slight indeed.

On the morning of February 1, the small force comprising this department found a tremendous task before it — to clear the streets of wires and place them beyond the reach of those prompted by curiosity or ignorance to handle or touch them. The men were divided up into squads, and sent out into the streets occupied by the tracks of the street railway to clear them of broken and fallen wires first, and later on the same was done in other streets in the city.

This necessitated the employment of extra men who were unskilled in this dangerous kind of work, in order to shorten the time in which a large portion of our streets would be kept in darkness.

Early in the day at my request you promptly issued an order forbidding the turning on current of high tension lighting circuits outside the underground district until it could be done safely. This order was complied with by all the electric lighting companies whose wires were overhead. Were it not for the promulgation and enforcement of this order a much longer time would be required to clear the streets and restore the electric light service, as skilled men in addition to our own force would be needed, and they could not be procured at any price.

After the removal of the wreckage from the streets, the lighting circuits were carefully inspected one by one before they were put in service, but owing to the weight of snow and ice on all wires a constant patrol and inspection had to

be maintained until the warm rain of Saturday, the 5th, relieved them of this excessive weight. Up to that time every one of the employees of this department were engaged in clearing away fallen and falling wires, a portion of the force being kept on duty every night to respond to the many calls that were sent in of troubles that were constantly occurring.

This storm proved beyond doubt the unreliability of overhead electric circuits, the possible dangers attending the same, and the great cost to their owners of maintaining them. No one can be found in Boston to-day who can or will say that the proper place for them is not underground.

With the close of the year 1897 the work of laying the necessary conduits in which to place the overhead wires within the district prescribed by the Act of 1894 was practically ended, and during the early months of 1898 the work of drawing in and connecting up the cables will be completed, and the poles and wires removed from the streets. It is true that there is one section of the city known as the 1898 district from which the poles and wires are yet to be removed, but they are so few in number that the task will be a very light one. It is to the credit of this department and to the companies engaged in the prosecution of this most important work that it will be completed so well within the time limit.

The presence of lines of poles and wires within the underground district may seem strange to many people but these are the lines of the long distance telephone company, which are exempt from the operation of the law of 1894. There are electrical difficulties attending the burying of long distance telephone wires that render it impracticable which I hope will be overcome in time, when these poles and wires will disappear from view with the others.

The same can be said of the overhead trolley wire, for while it is true that it can be dispensed with yet the difficulties to be overcome in laying down an open slot conduit between the tracks within the present underground district is so great that they can hardly be overcome. The cost of removing the obstructions alone would no doubt exceed the cost of relaying the track (which would have to be done in building the conduit). No estimate can be made of the amount and kind of obstructions to be met and removed in constructing an underground trolley system such as is in successful operation in New York, Washington and some other cities, in the narrow streets of our city where such a system is most desired. I trust that before many years some system will be devised equally as efficient as the underground



HANOVER STREET WITH POLES AND WIRES IN AND CROSSING IT, AND THE SAME AFTER THEIR REMOVAL.

Plate No. 5.

trolley which will not require the excavation of the streets or the relaying of the tracks.

The very objectionable practice of using the housetops for distribution points is gradually being discontinued, the electric companies conforming to the expressed wish of this department where it is possible to do so.

Underground wires can be highly insulated and kept in that condition for a number of years. Overhead wires are not so insulated and if they were could not be maintained in that condition for a reasonable length of time. Most of the fires caused by electric wires occur in the interior of our buildings, and those that attain large proportions occur when the occupants are absent or sleeping. Fires on the outside of buildings occur on trees, poles and fixtures most frequently, and when wires come in contact with metal portions of buildings such as gutters, ventilators, lightning rods, iron fronts, rails, etc. The insulation of overhead wires may be worthless (most of it is), the covering may all rot off (much of it does), then they become a source of danger to firemen, workmen and others, and would prove an indirect menace to buildings, their contents and inmates were it not for the high standard of work and material that is maintained in the installation of electric lights, motors, wires and fixtures by the interior division of this department. Miles upon miles of wire are placed within our buildings, hidden from view between floors and ceilings and concealed in hollow partitions, which, if not properly installed, would be a constant menace to buildings and contents, and the lives of the occupants as well. Upon the faithful supervision by the men of the interior division, together with the coöperation of the honest electrician contractor and electric companies depends the safety of this community.

The people of Boston note with pleasure the disappearance of unsightly poles, wires and fixtures, and commend this department for its persistence in pushing the good work along, not knowing that this is but a portion and by no means the most important part of the work of this department.

The interior wiring of buildings is constantly on the increase, and the small force employed in this division scarcely keeps up with it. Reinspection of old wiring and fixtures is absolutely necessary, but with the present force it cannot be done, as the entire time of the men is devoted to the supervision of new work; even when additions are made to existing plants a reinspection of the first installation is not possible. This is unfortunate as the bell-wirer, gas-fitter, plumber and amateur electrician may undo much that

has been done to insure the safe transmission of electrical energy.

The work of the interior division will continue to increase, no doubt, for some years to come as it has done steadily in the past, and as the thorough inspection and maintenance of the highest standard possible of such work and material contributes so largely to the safety of life and property, I trust this division will be given everything necessary to continue the good work already done.

In addition to their regular duties these men respond to all second alarms of fires, and respond to all calls from the officers of the Fire Department when they have any reason to believe that they are called upon to extinguish any fire due to electricity, when they proceed to make a careful examination; they make similar investigations when electric fires are reported by any reliable person.

The competition in the electric business is as fierce, if not more so, than that existing in other lines of trade, and the temptation to use cheap material and flimsy appliances is ever present. Owing to the ignorance of the general public on such matters those so disposed could use material and appliances, the use of which would be absolutely dangerous, were it not for the restraining hand of this department. To the credit of most of the manufacturing companies, be it said, they do not care to make material that is sure to cause serious loss, and in the end throw discredit on the electric business and eventually injure their own. Large amounts of this worthless stuff are condemned by this department, and sent to towns and cities where sharp-eyed inspectors are not present to interfere with their emphatic objections to the use of the same. While much of the material and many of the devices can be rejected or approved after a careful examination, there is a large amount on which judgment cannot be so passed, but actual electrical tests must be made to determine their true character. If the price at which certain material, on which depends the safe transmission of electrical energy depends, is sold for is any criterion of its worth, there is much of it installed at the present time that in the near future will cause no end of trouble and losses that cannot be now estimated.

The crying need of this department at the present time is a well-equipped electrical laboratory where all material could be submitted to test, and where our men could receive much valuable instruction; it is as necessary for the prosecution of the work of this department as engines, trucks and fire-boats are to the Fire Department, or surgical instruments to the

City Hospital. Unless this is soon provided I fear that we cannot continue to say in the future as we have in the past that "no fires or accidents due to imperfect wires or appliances have occurred in buildings inspected and approved by this department."

For the next two years there will be but little underground work done aside from service connections and any extensions the companies may see fit to make outside the prescribed district, and for the ten years, beginning with 1900, the Commissioner can compel the removal of poles and wires from but two miles of streets, while the average number of miles cleared per year in the district prescribed by the Act of 1894 was 7.6; this will reduce the amount of work to be performed by the underground division very largely, unless the companies decide to push the underground work faster than the law requires.

With the completion of the work in the underground district the number of overhead wires in the city will be greatly reduced, and the duties of the overhead division correspondingly so, and I hope that this state of affairs will continue until all overhead wires disappear.

The practice of placing transformers within or on buildings, or on poles and fixtures, has never been looked upon with favor by this department. In the underground district this objection is being overcome by placing large transformers of sufficient capacity to supply one or more blocks in the manholes, thereby avoiding the necessity of carrying the high potential wires within the buildings.

Gas is still found in the manholes in dangerous quantities, quite frequently in different sections of the city, five explosions of illuminating gas having occurred in the same, which fortunately resulted in no serious injury to any one, due in a great measure to the fact that there were but few people in the vicinity when the heavy cast-iron covers were blown into the air.

I still maintain that it is the duty of the Gas Light Companies to keep this dangerous product within their mains and distribution pipes, for when it escapes into the electric conduits and manholes they become as dangerous as powder magazines, for the means of igniting this explosive product is nearly always present in the form of stray currents that traverse the lead covering of the cables, any interruption of which will cause a spark that is sufficient to ignite this explosive compound.

In justice to the Gas Light Companies I must say that when notified by this department of the presence of gas in the

manholes, immediate steps have been taken to seek out and stop the leaks, and in nearly all cases they have been successful.

All companies owning manholes are required to open them frequently, and if gas is present report the fact to this office, when the necessary steps are taken to keep them ventilated and the leaks stopped.

WORK OF THE OVERHEAD DIVISION.

It will be seen that there was much less wire and a less number of poles and fixtures in the district prescribed for the year 1897 than in any of the districts prescribed for any of the preceding years; for instance, there was but one-sixth the amount of wire therein than was found in the 1896 district. For this reason this division has been able to give very much more attention to overhead construction in those portions of the city outside the underground district than formerly.

The condition of nearly all overhead construction shows a marked improvement in many respects, due mainly to the persistent efforts on the part of this department. The method of running wire and supporting it is under the control of this department, but the location of poles and fixtures is not.

No improvement in the insulation of high or medium tension wires has been attempted, as no manufacturers of such wires have succeeded in producing a covering that offers a large amount of insulating resistance and will resist the action of the elements sufficiently to assure a reasonable amount of life.

The number of transformers that have been placed on fixtures, on roofs, and on the walls of buildings, has been materially reduced within the underground district, as they are now being placed in the manholes in the streets very generally; this removes them beyond the reach of the public, and they cease to be a source of danger to the firemen while in the discharge of their duties.

That part of the law compelling the owners of low tension wires to insert fuses or some other equally good device therein is now generally complied with, and non-compliance with this clause is the exception and not the rule as was the case previous to the organization of this department.

Nearly all wires remaining overhead are now suitably tagged with the owner's name or initials so that the work of fixing the ownership and responsibility for unsafe or defective wires is now very much reduced.



COMMERCIAL STREET. SHOWING A LINE OF POLES AND WIRES ON EACH SIDE OF IT, AND THE SAME STREET AFTER THEIR REMOVAL.

duty of this department to report the death of one or more persons each year due partially or wholly to these iron poles.

Number of fixtures in 1897 district	728
*Number of poles in 1897 district	134
Wires on fixtures in 1897 district	1,070,400 feet.
Wires on poles in 1897 district	267,600 "
Wires in cables in 1897 district	106,100 "
Wires dropping to enter	129,750 "
Wires in well-ways, etc. . . .	750,500 "
Wires controlled by Boston Elevated Railway Co. .	296,000 "
Amount of dead wire removed during the year .	1,633,650 "
Amount of dead wire removed from 1897 district .	111,200 "
Amount of dead wire retained	57,000 "
Amount of dead wire in possession of department .	2,168 "
Amount of dead wire on hand at beginning of year,	77,168 "
Amount of dead wire sold and credited to the department	132,000 "
Number of poles in the city, exclusive of the Boston Elevated Railway Company poles, about . .	15,000
Unknown fixtures removed	774
Defect notices sent out	1,940
Defects covered by above notices	7,596
Fuse inspections made	3,750
Number of places found not fused	449
Lamp inspections	107

* Of these, thirty-five are connected underground and two are insulated (wooden) poles.

The following table shows the number of poles, fixtures, etc., in the 1897 district at the beginning of the year.

COMPANIES.	Poles.	Fixtures.	Arms.	Outriggers.	Wires on Poles.	Wires on Fixtures.	Wires in Cables.	Wires Dropping.	Trolley.	Span.	Feed.	Guard.	TOTALS.
Boston Electric Light Co.....	62	213	468	214	90,900	494,400	.....	79,050	.....	.....	.....	.....	664,350
New England Telephone and Telegraph Co..	61	18	68	34	109,500	144,300	77,000	14,550	.....	.....	.....	.....	346,350
Boston Fire Alarm Department.....	.....	44	101	30	34,750	117,600	27,000	8,100	.....	.....	.....	.....	187,450
Police Signal Service.....	.....	6	4	25	13,500	21,300	1,200	4,500	.....	.....	.....	.....	40,500
Boston Automatic Fire Alarm Co.....	.....	25	48	17	4,950	55,200	.....	3,900	.....	.....	.....	.....	64,050
Boston District Messenger Co.....	.....	.....	.....	9	750	17,100	.....	2,850	.....	.....	.....	.....	20,700
Mutual District Messenger Co.....	.....	4	.....	16	900	23,100	.....	5,100	.....	.....	.....	.....	29,100
Holmes Electric Protective Co.....	.....	1	1	.....	.....	14,100	.....	350	.....	.....	.....	.....	14,450
Western Union Telegraph Co.....	10	7	18	.....	6,600	62,700	.....	3,900	.....	.....	.....	.....	73,200
Edison Electric Illuminating Co.....	.....	7	12	5	.....	14,100	.....	2,700	.....	.....	.....	.....	16,800
Boston Auxiliary Fire Alarm Co.....	.....	2	1	4	300	6,000	.....	1,500	.....	.....	.....	.....	7,800
United Telegram Co.....	.....	1	1	.....	.....	1,800	900	150	.....	.....	.....	.....	2,850
Boston Electric Protective Association.....	.....	.....	.....	2	.....	1,200	.....	.....	.....	.....	.....	.....	1,200
Miscellaneous	1	28	34	16	5,250	97,500	.....	3,100	.....	.....	.....	.....	105,850
Boston Elevated Railway Co.....	507	.....	.....	.....	.....	.....	.....	.....	47,300	53,100	124,200	71,400	296,000
Wire in well-ways, etc.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	750,500
Totals.....	641	356	756	372	267,400	1,070,400	106,100	129,750	47,300	53,100	124,200	71,400	2,621,150

WORK OF THE INTERIOR DIVISION.—INSPECTION OF INTERIOR WIRING OF BUILDINGS.

Notices of new work received	4,799
Number of buildings (wiring completely examined)	473
Incandescent lights examined	128,857
Arc lights examined	2,396
Motors examined	1,121
Total horse-power of motors examined	3,739
Services examined	1,988
Defects reported	2,318
Defects corrected	1,452

The balance of the reported defects is in process of correction.

There has been an appreciable increase in the work required of this division over that of former years. With few exceptions new buildings erected are wired for the use of electricity for lighting, power or heating, or possibly for all three of the purposes mentioned.

It has been a physical impossibility for the limited force of this division to give the installing of electrical wires and apparatus during the year that constant and careful supervision which it should have received; and that which was installed at some time in the past, and which comes under the designation of old work, has received very little attention, with the exception that the old wiring of theatres, public halls and large area buildings, where great numbers of people assemble or are employed, has received that special attention which circumstances required.

The work of the division has been so systematized, however, that its energies have been utilized to the best advantage, and a very creditable decrease is shown in the number of defects reported in comparison with former years. This indicates that the work of the department is resulting in more careful work by electrical contractors with a consequent decrease of defective work.

So called "temporary wiring" for electrical effects in theatres and on the outside of buildings has been given special attention.

Many times during the past year wiring of a dangerous character was brought to this city by travelling theatrical companies, and were it not for the vigilance of this department, fires with possible loss of life might have resulted from the defective condition of the same.

All fires and accidents caused or supposed to be caused by electricity have been carefully investigated.



DEVONSHIRE STREET, SHOWING THE NET-WORK OF WIRES CROSSING AND RECROSSING FROM THE ROOF FIXTURES ON EACH SIDE, AND AGAIN AFTER THEIR REMOVAL. (No comments necessary.)

The total number of fires due to electrical causes is 113, and they are classed as follows :

Fires on outside of buildings	9
Fires in the interior of buildings	29
Fires on roofs of buildings	2
Fires on poles	3
Fires on trees	8
Bridge fires	1
Burnouts	3
Deaths (not counting March 4)	3
Injuries	16
Manhole explosions	5
Electric car fires	23
Miscellaneous	11
Total	<u>113</u>

As results of the accidents three men were killed, thirteen received severe shocks, burns or other severe injuries, and several were slightly injured.

Of the fires in the interior of buildings, four were caused by abnormal currents entering over low potential wires designed to carry harmless currents, due to their being crossed on the outside by high potential wires used for the transmission of electric light or power current, six were due to defective or unsuitable appliances, three to current entering buildings by the way of pipes, and the balance, sixteen in number, was due to miscellaneous causes of an electrical nature.

No fires or accidents were caused by wires or appliances that had been inspected and approved by the Wire Department.

A detailed account of the fires and accidents is herewith submitted.

FIRES.

February 16. Corner Green and Staniford streets. Electric car fire; cause, defective insulation. Still alarm.

March 4. At 11.45 A.M., an explosion of gas that had accumulated, occurred in the space between the top of the subway and the under surface of a temporary bridge that was constructed at the junction of Tremont and Boylston streets, over the excavations for and roof of the finished subway. It was not the province of this department to determine the cause of the presence of gas in this cavity, and it did not undertake to do so ; but as some of the electrical conduits passed through this space a thorough investigation was made to determine whether they caused the ignition of the gas or not. Such was not the case. An arc established between the

wheels of one of the cars passing this point and the rails, no doubt ignited the gas that was present and escaping between the openings in the planking.

The following were killed: W. A. Start, Benj. Downing, W. L. Vinal and Robert Libby.

The following died a few days later: B. R. Sargent, Georgianna Bates.

The total number injured was fifty. One street car was burned and several others wrecked. Four horses were killed, and the damage to property amounted to over \$32,000.

March 9. No. 159 Green street, Jamaica Plain. Slight fire on a painter's staging, due to the same being in contact with an arc light circuit of the Boston Electric Light Company.

March 9. Berkeley bridge. Slight fire under side of bridge, caused by a short circuit on street mains belonging to the Edison Electric Illuminating Company. The underground pipe of this set of mains terminated beneath the easterly end of the bridge, then three wires ran on porcelain on under side of bridge above and across the railroad tracks to where mains entered the pipe beneath the westerly end of the bridge. From a derrick in the yard of the N. Y., N. H. & H. R.R., four metal guy-ropes ran. One of these guy-ropes was secured to an iron girder or beam beneath the easterly end of the bridge; this guy-rope was also in contact with one of the wires, the insulation of which had gradually chafed and deteriorated, until finally wire was "grounded" by this guy-cable, resulting in a short circuit. Alarm from box No. 769.

March 23. Opposite No. 266 Bennington street. Wire of the New England Telephone and Telegraph Company broke and fell to the ground, crossing in its fall with a West End Street Railway Company feed wire at a poorly insulated joint, resulting in flashing and arcing until New England Telephone and Telegraph Company wire burned off. Still alarm.

March 23. Boylston street, between Washington and Tremont streets. Electric car fire caused by a defective rheostat. Still alarm.

March 26. No. 928 Washington street. Cause, located on wall between two shelves upon which were piled skates and other metallic articles was a jack-knife switch. A short circuit was made at this switch by a skate or other metallic article jarring down and coming in contact with the blades of the same. Loss considerable. Alarm from box No. 64.

March 29. Tremont row. Electric car fire, caused by a loose contact in a switch or cut-out box, as a result of which box and adjacent woodwork were ignited. Damage slight. Still alarm.

April 8. No. 25 Hawley street. A set of mains covered with so-called "Underwriters' Insulation" was in contact with a steam-pipe beneath sidewalk lights. These lights were not in perfect condition, the night was stormy and water came through, wetting the insulation of the wires, thereby grounding them on the pipe. The arc which resulted started a fire. Alarm from box No. 41.

April 10. Washington street, near Hollis street. Slight fire in electric car, caused by sparks from rheostat. Still alarm.

April 13. No. 465 Washington street. Opening of an arc light circuit in an arc light cut-out in the doorway. Alarm from box No. 49.

April 22. Corner of State and Devonshire streets. Electric car fire, caused by sparks from a defective rheostat. Alarm from box No. 36.



ROOF FIXTURES TORN FROM THEIR FASTENINGS, OWING TO THE ACCUMULATION
OF SNOW AND ICE ON THE WIRES DURING THE STORM OF
FEBRUARY 1, 1898.

April 24. Dudley street. Electric car fire. Damage slight. Still alarm.

April 29. P-street car station, South Boston. Displaced trolley-arm of a car formed a circuit between the trolley wire and a water-pipe used for automatic sprinkling system. Damage slight. Box No. 153.

May 4. No. 318 Federal street. Building was being torn down to make way for the new Southern Station; building material and rubbish were thrown upon the service wires of the Edison Electric Illuminating Company, a short circuit occurring as a result of same. Rubbish was ignited, causing considerable of a fire, but very little loss, as the material burned was of little value. Engine No. 7 called on still alarm.

May 6. Atlantic avenue, foot of High street. Electric car fire; cause, defective insulation. Still alarm.

May 7. Broadway, South Boston, opposite Lincoln School. Tree fire, caused by a wire of a series arc light circuit of the Boston Electric Light Company becoming detached from a tree insulator and "grounding" on the same.

May 10. Corner Clark and Commercial streets. Electric car fire; cause, defective insulation. Alarm from box No. 14.

May 13. Corner Albany street and Massachusetts avenue. Pole fire, caused by a series arc light circuit wire of the Boston Electric Light Company becoming detached from the insulator and "grounding" on pole. Damage trifling.

May 6. No. 262 Washington street. The feed of a linotype machine becoming clogged, an employee set to work correcting the difficulty; an incandescent lamp fed from the "grounded" neutral system of the Edison Electric Illuminating Company, being held in close proximity to the linotype machine to afford the necessary light to work by. While work was in progress what is known as a space band dropped out of the feed slot of the machine, one end of the same striking against the linotype machine which was "grounded," and the other end against the butt of the lamp, causing a short circuit, with the result that space band was melted and hot metal flew about the room. A few minutes after this occurred smoke was discovered coming up from between the floors, but the fire was extinguished without serious damage.

May 23. Opposite No. 32 Hawley street. Burn-out on Edison mains.

June 1. No. 56 Kilby street. Short circuit of service wires at end of service pipe. No damage except to service.

June 3. No. 1054 Washington street. Burn-out of a defective arc light cut-out on the outside wall of building. Still alarm.

June 11. No. 9 Elm street, Jamaica Plain. Fire on the outside of a stable; cause, primary wires of the Suburban Light and Power Company in contact with woodwork near a transformer. Raining hard at the time.

June 14. Atlantic avenue, near Broad street. Electric car fire; cause, defective insulation. Still alarm.

June 18. Congress street. Electric car fire; cause, defective insulation. Still alarm.

June 18. Corner Elm Hill avenue and Howland street. Tree fire, caused by high potential wires of the Suburban Light and Power Company coming in contact with and "grounding" on tree limbs.

June 20. Corner Harrison avenue and East Lenox street. Burn-out of a defective arc light cut-out located just inside of the building. Still alarm.

June 29. No. 1079 Boylston street. Cause, a short circuit and burning out of a steel-covered service cable of the Edison Electric Illuminating Company. This was a new cable just installed, and the burning out of the same was due either to an existing defect in the cable before it was installed or else injury to the same while being put in. Still alarm.

July 3. Nos. 8 and 10 Winter street. Fire, caused by a short circuit in a service cable of the Edison Electric Illuminating Company, the wood sheathing of wall and ceiling ignited thereby. Alarm from box 46.

July 11. Nos. 62 and 64 Harvard street, city. Cause, overheating of the resistance coils at the top of a low potential arc lamp, the overheating of the coils being due to the feed mechanism of the lamp failing to operate properly, the carbons thereby coming together and remaining so. This lamp was hung so that the top of the same came in the space between two floor timbers. A box had been made in this space and lined with $\frac{1}{8}$ -inch asbestos. The lamp was suspended from a porcelain hanger-board which was mounted on porcelain insulators. The asbestos, porcelain, hanger-board, etc., were insufficient, as when the coils became overheated the temperature in the box increased rapidly, and in a short time the wood behind the asbestos was ignited, and fire was then communicated to the building. Loss considerable. Alarm from box 57.

July 13. Near No. 48 Centre street. Tree fire, caused by a high potential wire of the Suburban Light and Power Company coming in contact with and "grounding" on a limb of a tree some 5 inches thick during a severe rain storm. Limb was burned completely off.

July 18. Opposite No. 897 Albany street. A series arc wire of the Boston Electric Light Company came in contact with and "grounded" on an iron brace to a cross-arm of a pole. No damage.

July 19. No. 89 Bedford street. Cause, leaking gas at a defective insulating joint of combination fixture which was ignited by a short circuit in fixture. Still alarm.

July 17. No. 507 Washington street. On front of building over a show-window and doorway was an advertising sign, the letters of this sign were made of wood $2\frac{1}{2}$ inches thick, in which holes were bored at regular intervals, through which the butts of incandescent lamps passed and were then screwed into receptacles in back of letters. These holes were countersunk on the face of the letters so that only a portion of the lamp bulbs projected beyond the face of the sign. The fire was due solely to the heat of the lamps night after night, as a result of which the wood with which they were in close proximity was charred and finally ignited. Still alarm.

July 21. Boston & Albany Railroad station, Kneeland street. Fire was in the office of the Western Union Telegraph Company and was the result of a cross between one of their circuits and a high potential wire at some point unknown. Alarm from box 56.

July 24. Corner Portland and Sudbury streets. Electric car fire; cause, broken wire, the arcing between the ends of the same causing sparks which ignited woodwork. Still alarm.

July 24. Nos. 98 and 100 Merrimac street. A short circuit on a metal cross bar 500-volt service switch. A severe thunder storm was in progress at the time and it is probable that a lightning discharge

pierced the washers that insulated the cross-bar from blades and then the 500-volt current followed the path made by the lightning. Switch destroyed, insulation on wires and backboard of switch burned. Still alarm.

August 4. No. 228 Eliot street. An underground service of the Edison Electric Illuminating Company entered this basement and terminated in a service cut-out beneath show-window of store above. This show-window was used for the display of fish, and water from ice for keeping the same dripped down upon the cut-out and an arc was started and maintained at the terminals of the cut-out for a considerable length of time. Cut-out and switch were destroyed, service cable badly injured and woodwork scorched. Still alarm.

August 11. Opposite No. 226 Hancock street, Dorchester. Tree fire caused by series arc wires coming in contact with and "grounding" on limbs of trees. Still alarm.

August 16. No. 11 Bay State road. Cause, electric lighting wires and gas lighting wires in contact with a canopy of a combination wall bracket, the gas lighting wires being "grounded" in another part of the building on an iron beam. Current from the electric light wires which was fed from the "grounded" neutral system of the Edison Electric Illuminating Company passed to canopy, and arc being established between gas lighting wires and iron beam, igniting insulation of wire, which communicated fire to neighboring woodwork. Still alarm.

September 7. Corner Shawmut avenue and Groton street. Electric car fire; cause, defective insulation.

September 13. No. 1156 Washington street. Break down of the insulation of a transformer on outside wall of building. No damage to building. Still alarm.

September 21. No. 147 Tremont street. A low potential arc lamp had been installed at a ceiling outlet intended and formerly used to feed incandescent lamps; this outlet was on the same circuit with a wall bracket outlet for 2 lights. The resistance used with this arc lamp was cut into the circuit at the circuit cut-out. As a result of the above faulty construction (done without the inspection or approval of this department) the bracket lamps and the arc lamp were in multiple with each other, and each was in series with the arc lamp rheostat. Under these conditions bracket lamps of course were of no service, but the bracket wiring had not been detached from circuit. One of the sockets of the lamps on the bracket became broken, and a short circuit in the same occurred, as a result of which, in combination with existing conditions, the arc light rheostat became overheated, but beyond scorching paint no damage was done to the building. A neighboring fire company was notified, however, by messenger, and members of the same responded.

September 23. Nos. 45 and 47 Court street. On the outside wall, caused by a cross between low potential wires of the New England Telephone and Telegraph Company and high potential wires of the Boston Electric Light Company. Damage to wires only. Fire department called by an alarm from box 326 of the automatic system.

September 24. Blue Hill avenue, near Dudley street. Electric car fire; caused by arcing of rheostat. Still alarm.

September 25. Corner of Seventh and C streets, South Boston. Electric car fire; cause, defective insulation. Alarm from box 129.

September 28. Dudley street, near Blue Hill avenue. Electric car fire; cause, "grounded" motor feed wire. Still alarm.

September 29. Corner Dorchester avenue and Broadway. Electric car fire; cause, the blowing of a fuse displaced a motor feed wire and caused same to "ground" on motor frame. Still alarm.

September 30. Harrison avenue and Harvard street. Electric car fire; cause, defective insulation. Still alarm.

September 30. Opposite No. 109 Dorchester avenue. Electric car fire; cause, sparks from rheostat ignited woodwork of car. Still alarm.

October 3. Tremont street. Cause, fuse in a primary cut-out blew and an arc maintained across terminals of same. Cut-out destroyed and insulation on wires ignited. Fire extinguished without other damage.

October 4. Nos. 395 to 403 Washington street. Cause, a short circuit of main which ran in moulding up an elevator well to the level of third floor, then across the well in moulding, except at point where wires passed in tubes behind guide-rail of elevator. Short circuit occurred at point where wires left moulding and passed in back of guide-rail, and was caused by a guide on bottom of elevator car striking against mains while car was in motion. Still alarm.

October 4. Vale street. Burning out of transformer on a fixture on the roof igniting the same; cause, overload on transformer. Alarm from box No. 271.

October 12. No. 34 Howard street. Suspended from ceiling of auditorium of this theatre was a metallic revolving trapeze decorated with about 200 incandescent lights. This trapeze was steadied by means of metal guy-cables on wires, one of which was in contact with a gas-pipe in O. P. flies. The wiring of trapeze was "grounded" on metal frame work of same. Current was furnished by the "grounded" system of the Edison Electric Illuminating Company. As result of the above-mentioned conditions, when the current was switched on the wiring of the trapeze it became overloaded and the insulation on the same threw off quantities of smoke. Further trouble was averted by the opening of the switch controlling the mains feeding this wiring. Fuses did not operate; they were of greater carrying capacity than they should have been, and "grounds" were not heavy enough to constitute a short circuit. This department was not notified of the installing of this trapeze, and the first knowledge of the same was when examination was made on receipt of trouble notification from the Fire Department.

October 12. Corner Howland street and Elm Hill avenue. Tree fire; cause, the breaking of a limb of the tree brought in contact with high potential wires of the Suburban Light and Power Company and low potential wires of the New England Telegraph and Telephone Company, burning tree limbs badly. Still alarm.

October 12. Nos. 961 and 963 Washington street. A slight roof fire, caused by the "grounding" of a series arc circuit of the Suburban Light and Power Company due to poor insulation. A severe rain-storm was in progress at the time. Alarm from Box 64.

October 18. Corner Broadway and B street, South Boston. Electric car fire; cause, defective insulation. Still alarm.

October 19. Corner Bulfinch street and Bulfinch place. Cause, a short circuit occurred in the armature of a passenger elevator motor, as a result of which the solenoid controlling the contact arm of automatic rheostat was robbed of current and the arm threw over slowly, putting the coils of the rheostat in circuit with the motor armature. As a result of this combination of circumstances the



CORNER NORTHAMPTON AND WASHINGTON STREETS, WHERE A LARGE NUMBER OF HORSES WERE KILLED DURING THE STORM OF FEBRUARY 1, 1898, BY COMING IN CONTACT WITH BROKEN WIRES.



VIEW ON ROXBURY STREET, SHOWING THE EFFECT OF THE SAME STORM ON POLES AND WIRES.

motor stopped, the elevator car being between floors at the time. The elevator attendant climbed out of the car, neglecting to first open the switch controlling the current for motor, and went in search of the manager. In the meantime the coils of rheostat overheated and rubber insulation of wires ignited and communicated fire to surrounding woodwork. Loss considerable. Still alarm.

October 20. Nos. 120 and 122 North street. Electric arcs formed between drain and water-pipes which ran in close proximity to each other, and as a result of same the water-pipe was melted in four places; $\frac{5}{8}$ inch, $1\frac{3}{4}$ inches, $3\frac{3}{4}$ inches and 6 inches being the respective lengths of the several places melted. The drain pipe for this building passed through the wall to basement of Nos. 116 and 118 North street, and then just before passing into the street this drain pipe crossed over and rested upon the tube of the Edison Electric Illuminating Company's service entering this basement. To this contact, between the drain pipe and the Edison Electric Illuminating Company's service tube, in combination with electrical trouble in their underground system, was undoubtedly due the arcing between the two pipes and consequent melting of water-pipe, as the current followed back over the service-pipe into the building, then from service-pipe to drain-pipe; thence to water-pipe to ground. No damage except to water-pipe.

October 26. Corner Washington and Eliot streets. Electric car fire; cause, burning out of armature. Still alarm.

November 1. Just south of Massachusetts avenue on line of Boston and Albany Railroad, a cable box of a Western Union Telegraph Company pole was burned and a switch-board and telegraph instruments belonging to above company in switch-house No. 7 were destroyed. Caused by a cross between low potential wires of the Western Union Telegraph Company and high potential wires of the Boston Electric Light Company on Boylston, near Hereford street.

November 11. No. 255 Beacon street. Moulding containing wires run in that part of basement beneath sidewalk became saturated with water from a leak which had evidently existed for some time, and a leakage of current took place between the enclosed wires. Smoke was discovered issuing from the moulding and the current was cut off, thereby preventing further trouble. No damage except to wires and moulding.

November 12. Northern Union Station, Causeway street. The burning of insulation for a few feet of a 180-wire cable beneath floor of baggage-room and the charring of timbers and floor boards at the point where fire occurred; cause, cross between a wire or wires of the Western Union Telegraph Company with high potential wires at some point unknown.

November 15. Huntington avenue. Electric car fire; cause, defective insulation on wires running between controller and motor. Still alarm.

November 26. No. 989 Washington street. Cause, opening of a series arc circuit at a point about three inches from where circuit wire entered binding-post of lamp, the arc resulting igniting insulation of wire, scorching ceiling, etc. The switch on hanger-board of this lamp was operated by means of a pole in the hands of occupants of the premises. The opening of circuit was due to the weakening and finally breaking of the wire as a result of accidental blows given to same when switch was being operated. Alarm from Box 64.

November 26. Zeigler street, near Warren street. Tree fire; cause, high potential wire of the Boston Electric Light Company became detached from insulator and "grounded." Still alarm.

November 26. Warren, opposite Dale street. Tree fire; cause, high potential wire of the Boston Electric Light Company became detached from an insulator and "grounded." Still alarm.

December 4. Corner Dudley and Greenville streets. Tree fire; cause, high potential wires of the Boston Electric Light Company "grounding" on trees. Still alarm.

December 30. Corner Franklin and Arch streets. Cause, burn-out in defective cut-out box at top of outside standpipe. Alarm from Box 49.

November 28. Manhole at the corner of Summer and Otis streets. Burn-out of feeders in underground cables of the West End Street Railway Company; cause, "grounding" of one of the feed cables due to failure or injury of insulation.

January 4. Boylston, near Washington street. Electric car fire; cause, sparks from a defective rheostat.

January 10. No. 30 Dorchester avenue. H. G. Jordan & Co. Cause, vibration of building caused a wire to break where it took a turn about an insulator and arc between broken ends of wire ignited insulation of same.

January 12. No. 935 Washington street. Wires of a series arc circuit of the Boston Electric Light Company were in the way of painters who were at work renovating the premises. Under the supposition that wires were dead the foreman of the painters took a chisel and hammer and cut one of the wires off. The arc resulting at the point where the circuit was opened ignited insulation on wire and also the adjacent woodwork. Alarm from Box 65.

January 20. Opposite 28 to 38 Portland street. Burn-out in the feeder tie line of the Edison Electric Illuminating Company.

January 20. No. 28 Portland street. A current of electricity entered these premises over the gas-pipe, heating the same, melting lead joint at gas meter and arcing between gas and water pipes; cause, a burn-out in a feeder tie line of the Edison Electric Illuminating Company, the pipe of which was in contact with a gas main in the street.

January 20. No. 42 Portland street. A current of electricity entered this building over a gas-pipe, arced to water-pipe, melting a hole in same, charged an iron clothes line which was stretched across the kitchen and was in contact with water and gas-pipes, arcing at points of contact, igniting woodwork. Due to same cause as fire at 28 Portland street.

January 31. Corner Tremont and West streets. Electric car fire. Cause, sparks from a defective controller-box.

January 31. Kneeland street, Boston & Albany Railway Station, Western Union Telegraph office. Cause, a cross between wires of the Western Union Telegraph Company and high potential wires at some unknown point outside of the building.

ACCIDENTS.

February 12. Mr. A. E. Treen, a carpenter in the employ of the Boston Electric Light Company, while at their Ferdinand street station had his right hand badly burned and his face singed as a result of a short circuit of a 500-volt switch, the base of which he

was measuring at the time. A pair of metal calipers were used for getting sizes of holes, metal parts, etc., which were laid down on wood frame work just above the switch; he then proceeded to get the dimensions of the base of switch, and while he was doing this the calipers was knocked down or otherwise caused to fall from where they had been and drop against the contacts of switch.

April 6. Opposite No. 1063 Boylston street. Employees of the West End Street Railway Company while attempting to get into position a metal guy rope from a derrick to an anchor post, lost control of it and let it fall on a trolley wire which was burnt off and fell to the ground; the insulation of the feed wires was also ignited.

March 10. Tremont street, opposite Castle street. Explosion of illuminating gas which had collected in the New England Telephone and Telegraph Company manhole at above place. Cover of this manhole was blown about fifteen feet into the air and the door to the fire alarm box No. 85, which is nearby, was blown open and hinges of the same broken.

April 17. No. 18 Faneuil Hall square. Complaints were made that persons entering the doorway at above number received shocks of electricity. In this doorway was a set of mains in moulding run on a partition wall. For about two inches above floor moulding had rotted and insulation on the wire was badly injured, as a result of dampness due to the close proximity of a fish-chest or tank on the other side of a partition. As the day was stormy the floor of the entry-way was wet and became charged with electricity from defectively insulated mains. These mains were fed from a "grounded" system and as the wet sidewalk was a better "ground" than floor of entry-way, people on entering same with one foot on the sidewalk and the other on the entry-way floor would receive shocks.

April 26. No. 552 Washington street. Mr. A. A. McDonald had two fingers severely burned as a result of a short circuit caused by the metal blade of a screw-driver, which he had in his hand at the time, coming in contact with the terminals of an electric light service cut-out. Changes were being made in the basement of above-named number, and service cut-out, cable, etc., had been pulled down and dropped upon the floor. Later, Mr. McDonald attempted to move or throw them out of his way with the result above stated.

May 1. Mr. George Williamson, while at work repairing a private telephone line between house No. 493 Centre street and the house next to it, received a shock of electricity which rendered him unconscious for upwards of fifteen minutes. He also received a burn across the fingers of one hand. Passing down between these two houses was a primary circuit of the Suburban Light and Power Company which it appears Mr. Williamson had been informed was a telephone circuit. The morning was damp, and he stood on the lawn between the houses and attempted to throw a coil of bare copper wire over the primary circuit, at the same time holding one end of it in his hand. Fortunately the attempt was unsuccessful but the coil struck one of the primary wires as a result of which contact, current of the primary circuit was momentarily "grounded" through Mr. Williamson's body.

June 1. Mr. T. T. Kelley received severe burns on his right hand as a result of a short circuit while making connections on a 220-volt power circuit on the roof of the Carter-Rice Building, No. 226 Devonshire street.

July 12. Washington street, opposite Hotel Langham. Trolley wire broke and fell to the ground; in the meantime the trolley of car No. 2172 slipped from the wire and the slack of the same came in contact with the base of the trolley-arm. The flashing and arcing that resulted at the point where the contact between the trolley-arm and wire occurred, alarmed the passengers in the car and a number of them jumped to the street, receiving injuries in so doing.

July 13. Mr. M. Kearney, a lineman in the employ of the Boston Electric Light Company, was severely shocked and received burns to both hands by coming in contact with a 2,000-volt alternating circuit of the Boston Electric Light Company on B street, between West Fourth street and Broadway, South Boston. He was in a tree for the purpose of pulling through a new wire; between the branches of the same tree also ran the 2,000-volt alternating circuit before mentioned. Mr. Kearney's spurs slipped and he slid down the limb of the tree, his left hand coming in contact with one of the wires of the alternating circuit at a point where it was fastened with tie wire to a tree insulator. The circuit thereby being "grounded" momentarily through Mr. Kearney and the tree.

July 16. Corner Centre and Old Heath streets. While metal guys attached to a tower used for excavating purposes in the Stonybrook sewer construction were being shifted, the slack in them permitted a contact with the trolley wire of the West End Street Railway Company; they became charged thereby, and the employees were compelled to abandon them, a number of the men getting severe shocks before so doing. The tower, guy and span wires fell to the ground. The foreman in charge of the men claimed to have received a bad shock, and two horses were disabled.

July 17. William H Barker, of the Boston Fire Alarm Company, climbed the pole on the reservoir grounds, corner White and Eutaw streets, East Boston, for the purpose of making repairs on a fire-alarm circuit. Upon reaching the bottom cross-arm occupied by high potential wires of the Boston Electric Light Company he received a shock sufficient to throw him to the ground. His injuries were serious, and he was removed to the Massachusetts General Hospital.

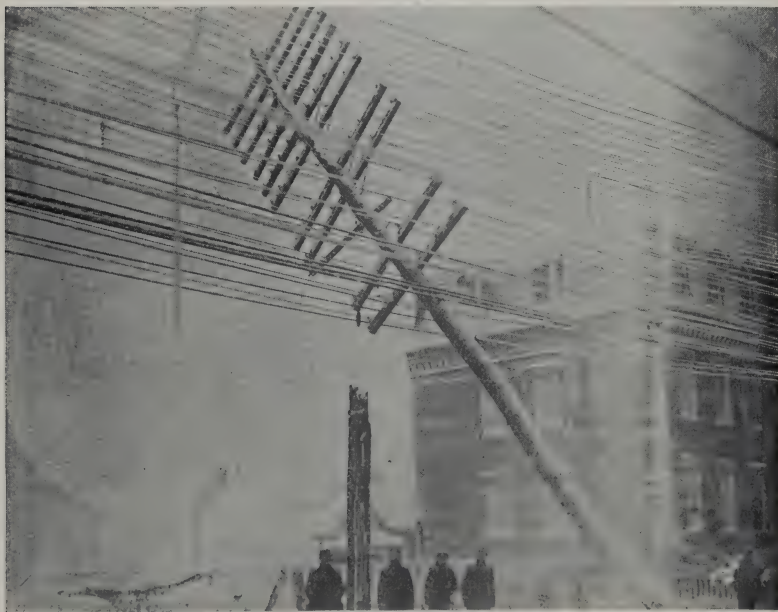
August 3. Longe Purella, nine years of age, fell from an electric lamp pole on Commercial street, opposite Henchman street, about 9 P.M., and died the following morning at 3 A.M. Purella climbed the pole (the ordinary type of iron street electric lamp pole) in search of sparrows that make their nest in the iron hoods, and fell from the top of the pole to the sidewalk, fracturing his skull. His fingers of both hands had blisters or burns and it is probable that when he reached the top of the pole he stood on the wooden cross-arm of same, grasped the hood rod with one hand, and with the other hand reached up over the hanger-board where the birds usually roost, and in so doing touched the live connections of the hanger-board, thereby "grounding" the circuit through himself and the lamp post.

August 11. William Nelson received severe burns on his face and arms as a result of a short circuit which he accidentally caused while attempting to place a fuse in position.

August 16. Frank Harkins, a lamp trimmer in the employ of the Boston Electric Light Company, while attempting to trim a city lamp at the corner of Pleasant and Thornley streets, Dorchester, at about 10.30 A.M., received a shock of electricity and fell from the pole as a result of which his right wrist and ankle were fractured. The palm of the right hand bore a slight burn-mark, showing where



ROXBURY STREET, AT GUILD ROW, SHOWING THE EFFECTS OF THE STORM
ON POLES AND WIRES, BOTH LAYING IN THE STREET.



HARRISON AVENUE, SHOWING POLE BROKEN OFF AND SUPPORTED BY WIRES

electrical contact was made. The circuit of which this lamp forms a part is a night circuit, and its being alive at the time of the accident was due to the fact that it was crossed at another part of the circuit with a live primary alternating circuit.

August 18. Mr. C. D. Hodel, an oiler in the employ of the Boston Electric Light Company, was found lying on the floor of the company's South Boston station by a fellow employee, and although immediate steps were taken the attempts to resuscitate him were unsuccessful. Mr. Hodel was found near a 50-light T. and H. arc light dynamo, and it is supposed that he was about to pass by the same and observing that one of the brushes was loose, attempted to fasten it properly in place, using his left hand for this purpose, his right arm being in contact with the frame of the dynamo, either by accident or by his leaning against the same at the time. The brush referred to was found out of position immediately after the accident, and evidences of burns were found on the frame of the dynamo where the man's right arm was supposed to have touched. Burns were found on the inside of the left hand and on the outside of the right forearm, showing plainly where electrical contacts had been made. The leads from the dynamo were lead-sheathed cable, the lead being cut back from the ends of the same several inches. The exposed rubber insulation of one of these leads was badly rotted, caused by drippings of oil on the same, and the wire had evidently been at some time, and probably at the time of the accident, in contact with the frame of the dynamo.

September 5. Explosion on Washington street, opposite Hollis street, at a Lowry hydrant, the cover of the same being blown into the air by the force of the explosion, and flames issuing from the hydrant hole somewhat damaged the clothing of a lady passing by. Passing beneath and in contact with the box of this hydrant was an underground main of the Edison Electric Illuminating Company, in which at a point directly beneath this hydrant box a short circuit occurred about the time of the explosion. In the space enclosed by the wooden box frame of the hydrant there may have been illuminating or sewer gas which was ignited by the arc of the short circuit, or the gas may have been due to the action of the heat generated by the short circuit on the insulating compound in the Edison tube, the gas forming an admixture with air and then being exploded by the arc of the short circuit.

September 16. Thomas Kelley received a severe shock and had the palm side of the fingers of his right hand badly burned by the same coming in contact with a broken and uninsulated iron wire of the Postal Telegraph Cable Company, the end of which had been tied around a West End Street Railway Company pole, bringing the wire at a point higher up, in contact with a series arc circuit of the Boston Electric Light Company. Whoever tied the end of the wire around the pole experienced no trouble as the arc circuit was dead at the time. In the early evening, when the arc circuit was put in operation, the broken wire of the Postal Telegraph Cable Company was charged, due to its contact with the same.

September 23. Washington street, between Newton and Canton streets. The trolley of a passing car left the wire and the trolley-arm flew up against a span wire, causing the trolley wire to break and fall to the ground. A number of passengers jumped from the car, and among them was Mr. John Spellman, who was injured by being struck in the face by the fallen wire. The West End Street

Railway Company employees were soon on the scene, and in making repairs, lineman Florman, owing to a ladder being misplaced, fell to the ground, a distance of about fifteen feet, sustaining injuries to his back.

October 1. Albert Walsh, a lineman in the employ of the Boston Electric Light Company, while on a pole opposite No. 162 Pleasant street, Dorchester, for the purpose of cutting a portion of a live primary alternating circuit of the above-mentioned company, received a shock and fell to the ground; he was removed to the City Hospital where he died the same day. He had cut one wire and was in the act of cutting the other, the tip of his left elbow being in contact with the live portion of the first wire at the time, and his left hand being in electrical connection with his cutters, owing to the end of one handle of the same being devoid of insulation. The tip of his left elbow and palm of his left hand showed plainly by marks of burns where electrical contacts were made.

October 13. Workmen while operating one of the derricks at the site corner of Boylston street and Bumstead court, where the foundation for a new addition to the Hotel Reynolds was in process of construction, allowed the metal block from the boom of a derrick to strike against the trolley-wire of the West End Street Railway Company thereby "grounding" the same through the block, metal hoist rope and guy cables of the derrick. The trolley-wire melted and the ends dropped to the street as a result of which the trolley-wire heated and the solder at the trolley-wire hangers melted, allowing it for a distance of 150 feet or more to fall to the street.

October 28. Lineman Roberts, an employee of the Suburban Light and Power Company, while standing on his spurs on a wooden pole at the corner of Swett street and Massachusetts avenue, and while in the act of cutting a live wire of a 2,000-volt alternating circuit received a shock (by being "grounded" through the pole) sufficient to throw him to the sidewalk, a distance of about 25 feet, fracturing his right thigh and badly bruising the right side of his face. It had been raining hard for some hours previous to the accident, and the pole was saturated with water.

November 1. Kneeland street, opposite Lincoln street and South street. Explosions of illuminating gas occurred in the manholes of the Western Union Telegraph Company at above locations, blowing covers into the air and breaking the same.

November 2. Park square. Pole supporting trolley wire charged with electricity. The charging of this pole was due to the breaking down of an insulator of a trolley-wire guy running to this pole. Beyond slight shocks to passers-by and to a letter-carrier while attempting to collect letters from the mail-box on this pole no harm was done.

December 14. Corner Dorchester street and Dorchester avenue, horse killed by a live wire. At the time of the accident linemen of the Boston Electric Light Company were removing a wire guy which crossed Dorchester avenue, and during the operation allowed the slack to hang within such a distance of the ground that a horse and buggy belonging to Mr. William Tyner collided with the same, the wire lodging between the horse and one of the shafts. Before he could be brought to a standstill the guy wire was dragged sufficiently to permit a portion of the same to come in contact with the trolley wire of the West End Street Railway Company, the guy wire thereby becoming charged with a current of electricity sufficient in intensity to kill the horse.

December 29. Harvard street, Dorchester. Violent explosion of gas in a manhole, cover being blown into the air to a height of about 30 feet and striking the cross-arm of a telegraph pole in its descent breaking it off.

January 2. Explosion in manhole of the Western Union Telegraph Company on Eliot street, near Washington street, and on Kneeland street, near Washington street. At the first-mentioned place the manhole cover was thrown into the air to a height of about 6 feet and at the other the cover was thrown to a height of about 25 feet and was broken when it struck the ground. Cause, illuminating gas in manhole ignited by an electric spark.

UNDERGROUND DIVISION.

The men employed in this division obtain and keep a record of the amount of trench opened, ducts laid, manholes built and feet of cable drawn in, also the style of ducts and material of which they are made, together with the kind of cables and the insulating material used on the conductors.

They are especially charged with the duty of keeping all electrical conduits of any electrical systems clear of gas, water, steam or other pipes laid in the streets or private ways of the city. This precaution is absolutely necessary, for in case of the failure of the insulation of the cables the conduits and pipes described above when in contact would afford a path over which currents of electricity could reach the interior of buildings, which might cause serious damage to property or injury to persons; such escape of current has taken place in the past, but fortunately resulted in but small loss of property and no injury to persons. Failures of insulation of underground conductors if discovered before current escapes to the ground in quantities sufficiently large to cause a "burn-out" will cause no serious damage to cables or ducts, and the defective sections can be removed or repaired and the cause of the failure ascertained; but when current enough escapes to burn the insulation serious consequences result both to cables and ducts. Where a number of cables or conductors are in one duct they are all pretty apt to be injured where a "burn-out" occurs in one of them.

Where possible the men of this division report the "burn-outs" and the causes if they can be ascertained, but very often this cannot be done. There has not been a very large number of failures of insulation of underground conductors considering the large amount now in use, and as most of them occur at night they have to be repaired as promptly as possible, consequently I have to depend in a measure on the companies owning the cables for the number of accidents of this kind, and the causes when they can be determined; this

information is cheerfully given by them. In the drawing-in system a section of the cable that fails can be drawn out and replaced; but one instance has occurred where it could not be done as the lead and copper of the cables were welded to the iron of the ducts owing to the excessive heat.

Where burn-outs occur in the solid system the street must be opened in order to remove the damaged section and substitute another therefor. A large number of the failures in this system have been due to excavations under and around the tubes enclosing the conductors (those engaged in such excavations not taking necessary precautions to properly support the tubing after the earth on which it had rested had been removed).

Daily insulation measurements are made of all underground conductors where possible, and where this cannot be done such measurements are made weekly; this is done in order to detect any failure of the insulation. While a gradual drop in the insulation of underground conductors indicating a general failure thereof can be detected and guarded against, a slight injury to the insulation or slight defects at points widely separated from each other cannot always be detected by insulation measurements, and when not detected in this manner a "burn-out" results rendering that section of the cable inoperative. If such defects are in the manholes they can be as a rule easily remedied, but when they occur in the ducts between the manholes the section of the conductor must be drawn out.

Reports of all insulation tests are made to this department and if the insulation falls below the point fixed by it the use of such cables must be discontinued until such time as the insulation is restored to a satisfactory condition.

When deemed advisable the insulation measurements are witnessed by a representative of this department, and if the results are not satisfactory steps are taken to locate the trouble or discontinue the use of the cable.

DISTRICT FOR 1897.

The 1897 district covered that portion of the underground territory bounded as follows: Commencing at the junction of Tremont and Bromfield streets, the boundary line runs through Tremont street to Tremont row, through Tremont row to Hanover street, through Hanover to Washington street, through Washington street to Haymarket square, through Haymarket square to Charlestown street, through Charlestown to Causeway street, through Causeway to Commercial



COMMONWEALTH AVENUE, SHOWING THE WIRES STRETCHED, BROKEN
AND COVERED WITH SNOW AND ICE.



NORTH HARVARD STREET SHOWING POLES BROKEN OFF AND RESTING
ON TREES AND BUILDINGS

street, through Commercial to Hanover street, through Hanover street to the water-front; commencing at this point the line runs along the Harbor Commissioners' line to Cambridge street; thence through Cambridge to Joy street, through Joy to Beacon street, through Beacon to Park street, through Park to Tremont street, through Tremont to Bromfield street, to the point of beginning.

This district contains 10,157,040 square feet, or between one-fourth and one-fifth of the total prescribed district.

The work of building the electrical subways in this district has been completed, and cable drawn in to replace the overhead wires. In addition, a large amount of work has been done in other sections of the underground district and in streets of the city outside the same.

The section of the city prescribed for the year 1898 is that portion bounded as follows: Commencing at the junction of Joy and Beacon streets, the boundary line will run through Joy to Cambridge street, through Cambridge street to the water-front; commencing at this point the line will follow the Harbor Commissioners' line to the extension of the line of Berkeley street; thence through Berkeley to Tremont street, through Tremont street to Castle square, through Castle square to Ferdinand street, through Ferdinand street to Columbus avenue, through Columbus avenue to Park square, through Park square to Charles street, through Charles to Beacon street, and through Beacon street to the point of beginning at Joy street.

This district contains 7,346,300 square feet, and is the only remaining district of the section of the city proper, north of Dover street and Berkeley street, in which wires were to be placed underground by authority of chapter 454, of the Acts of 1894.

COMPANIES AND INDIVIDUALS DOING UNDERGROUND WORK DURING 1897.

For Light and Power Purposes. (High Tension.)

Boston Electric Light Company.

Boston Elevated Railway Company.

Church Green Electric Light and Power Company.

Suburban Light and Power Company.

Park Department.

Edison Electric Illuminating Company.

Brookline Gas Light Company.

Public Institutions Department.

Massachusetts Homœopathic Hospital.

Barnes & Dunclee.

For Telephone and Telegraph, Signalling and Miscellaneous Purposes. (Low Tension.)

New England Telephone and Telegraph Company.

Western Union Telegraph Company.

Boston Fire Department.

Boston Police Department.

H. N. Clark.

Combination of Small Companies, including:

Boston Automatic Fire Alarm Company.

Boston Electric Protective Association.

Holmes Electric Protective Company.

Boston District Messenger Company.

Mutual District Messenger Company.

Postal Telegraph Cable Company.

Stock Quotation Telegraph Company.

Mixer Brothers.

United Telegram Company.

STREETS IN WHICH CONDUITS HAVE BEEN LAID
DURING 1897.

In the underground district, that is, that portion of the city proper, north of Dover and Berkeley streets, underground conduits have been laid in the following streets:

Allen,	Central,	Exchange place,
Anderson,	Chambers,	Exchange,
Ash,	Chardon,	Federal,
Atlantic ave,	Charles,	Fort Hill square,
Avery,	Charlestown,	Franklin,
Battery march,	Chestnut,	Friend,
Bennett,	Clinton,	Fulton,
Berkeley,	Commercial,	Green,
Beverly,	Congress,	Griffith's wharf,
Blossom,	Cooper,	Grove,
Boston Common,	Court,	Hanover,
Bosworth,	Cove,	Harrison ave.,
Bowdoin,	Cross,	Harvard,
Bowker,	Custom House,	Haverhill,
Brimmer,	Devonshire,	Hawkins,
Broad,	Doane,	Hawley,
Bulfinch,	Dock square,	Haymarket square,
Bumstead court,	Dover,	Head place,
Cambridge,	Eastern ave,	Henchman,
Canal,	Elm,	High,
Causeway,	Essex,	Howard,



SWETT STREET, SHOWING TWO LINES OF POLES WITH THE WIRES LAYING
IN THE STREET, COMPLETELY BLOCKING THE SAME.



LAMARTINE STREET, SHOWING POLES BROKEN OFF AND HELD UP BY
WIRES RESTING ON BUILDING.

India square,	Mt. Vernon,	River,
Isabella,	Myrtle,	Somerset,
Joy,	Norman,	Spring,
Kneeland,	North Grove,	Staniford,
La Grange,	North,	State,
Lewis,	North End park,	Sudbury,
Leverett,	Oak,	Summer,
Lynde,	Park square,	Temple place,
Mason,	Phillips,	Travers,
McLean,	Pinckney,	Tremont,
Merrimac,	Pitts,	Washington,
Middlesex,	Poplar,	Willow,
Minot,	Portland,	Winthrop square.

OUTSIDE THE UNDERGROUND DISTRICT CONDUITS HAVE
BEEN LAID IN

Aberdeen,	Dorchester ave.,	Newbury,
Acton,	Dudley,	Park (Dor.),
Albany,	Exeter,	Parkway (Forest
Alford,	Falmouth,	Hills),
Arundel,	Franklin park,	Peter Parley,
Bay State road,	Gloucester,	Quincy row,
Beacon,	Guild row,	Scotia,
Blagden,	Harrison ave.,	Shawmut ave.,
Boylston,	Huntington ave.,	St. Botolph,
Bradford,	Jamaicaway,	Tremont,
Canton,	Kenmore,	Trinity pl.,
Clarendon,	Malden,	Warren,
Columbus ave.,	Main,	Washington,
Cumberland,	Milford,	Westland ave.,
Dalton,	Montgomery,	W. Newton.
Dartmouth,	Morton,	

The number of permits and electrical approvals for street openings granted by this department in connection with the underground work is 1,851.

Before a permit is granted for underground conduits a plan is required at a scale of 20 feet to the inch, showing everything underground in the street and the proposed location of the conduits. After the conduits are laid a finished plan is filed, showing the exact location of the conduits.

The number of underground plans filed during the year is 180.

The main conduits laid this year consist of cement-lined vitrified clay, wrought-iron or wooden duct; only a small

amount of the last-named was laid. For the service connections made from the manholes to points of service, wrought-iron pipe is used exclusively.

The total work for the year 1897 comprised —

154,580 feet of subway.
 742,392 feet of duct.
 1,099 service connections.
 782 manholes built.
 853,794 feet of cable drawn in.

The appended tables show the work supervised by the Underground Division :

WORK OF 1897 INSIDE DISTRICT OF 1897.

COMPANIES.	Feet of Subway.	Feet of Duct.	Feet of Cable.	Number of Conne- ctions.	Number of Man- holes.
Boston Electric Light Co....	25,903	75,482	110,228	186	173
Boston Elevated Railway Co.....	7,099	77,528	32,148	6	32
*Edison Electric Illuminating Co. ..	2,762	28,943	14,708	34	13
New England Tel. & Tel. Co.	2,145	11,868	17,000	41	10
Boston Police Sign ~~al~~ Service	3,994	5,874	23,722	20	7
Boston Fire Department.....	1,713	3,325	9,776	20	5
Western Union Telegraph Co.	1,483	1,603	1,824	1	
Combination of Small Companies...	161	933	†	2	2
Boston District Messenger Co.....			547		
Boston Electric Protective Asso'n...			412		
Mutual District Messenger Co.....			472		
Holmes Electric Protective Co.			135		
Boston Automatic Fire Alarm Co...			350		
United Telegraph Co.			210		
Mixer Brothers.....			75		
Totals.....	45,260	205,556	211,607	310	242

* Also 5,928 feet of subway and 7,234 feet of 3-wire solid tube, with 5 distribution boxes.

† See individual companies.

WORK OF 1897, INSIDE "PRESCRIBED DISTRICT," BUT
OUTSIDE THE 1897 DISTRICT.

COMPANIES.	Feet of Subway.	Feet of Duct.	Feet of Cable.	Number of Con- nec- tions.	Number of Man- holes.
* Edison Electric Illuminating Co...	9,150	89,822	48,672	181	43
Boston Elevated Railway Co.....	5,251	46,203	20,824	4	26
New England Tel. & Tel. Co.....	5,236	37,835	53,000	61	25
Boston Electric Light Co.....	5,742	26,675	243,031	180	72
Boston Fire Department.....	3,519	4,354	1,220	12	13
Combination of Small Companies ..	983	5,063	.....	25	10
Public Grounds Department.....	1,455	1,590	3,390	4	8
Western Union Telegraph Co.....	359	1,129	10,643	10	3
Boston Police Signal Service.....	522	949	3,278	9	2
Church Green Elec. Light & P. Co..	426	946	2,620	9	4
Postal Telegraph Cable Co.....	116	116	2,441	4	
H. N. Clark.....	43	43	43	1	
Boston District Messenger Co.....	.....	.....	1,458		
United Telegram Co.....	.....	.....	816		
Suburban Light and Power Co....	.....	.....	2,466		
Boston Elec. Protective Asso'n....	.....	.....	2,385		
Mutual District Messenger Co.....	.....	.....	2,815		
Mixer Brothers.....	.....	.....	2,000		
Boston Automatic Fire Alarm Co...	.....	.....	1,935		
Stock Quotation Telegraph Co.....	.....	.....	700		
Holmes Electric Protective Co.....	.....	.....	3,777		
Totals.....	32,802	214,725	407,514	500	206

* Also 20,021 feet of subway and 24,998 feet of duct of 3-wire solid tube, with 29 distribution boxes.

WORK OF 1897, OUTSIDE "PRESCRIBED DISTRICT."

COMPANIES.	Feet of Subway.	Feet of Duct.	Feet of Cable.	Number of Con- nections.	Number of Man- holes.
New England Tel. & Tel. Co.....	50,959	204,311	75,000	112	161
Boston Elevated Railway Co.....	2,275	46,132	44,943	7	12
* Edison Electric Illuminating Co...	4,346	30,891	18,250	63	13
Boston Electric Light Co.....	7,457	18,847	41,089	32	40
Brookline Gas Light Co.....	4,260	12,250	1,248	14	† 95
Park Department	4,561	4,561	6,918	23	7
Boston Fire Department	1,260	2,256	15,000	14	4
Boston Police Signal Service	675	1,628	26,000	14	
Public Institutions Department.....			4,240		
Western Union Telegraph Co.....			750		
Mass. Homœopathic Hospital.....	510	1,020	1,020	2	2
Barnes & Dunklee.....	215	215	215	8	
Totals	76,518	322,111	234,673	289	334

* Also 11,274 feet of subway and 14,249 feet of duct of 3-wire solid tube, with 6 dis-
tribution boxes.

† This includes 83 four-way boxes.

A detailed report is submitted, showing the underground work of the various companies for the year ending January 31, 1898.

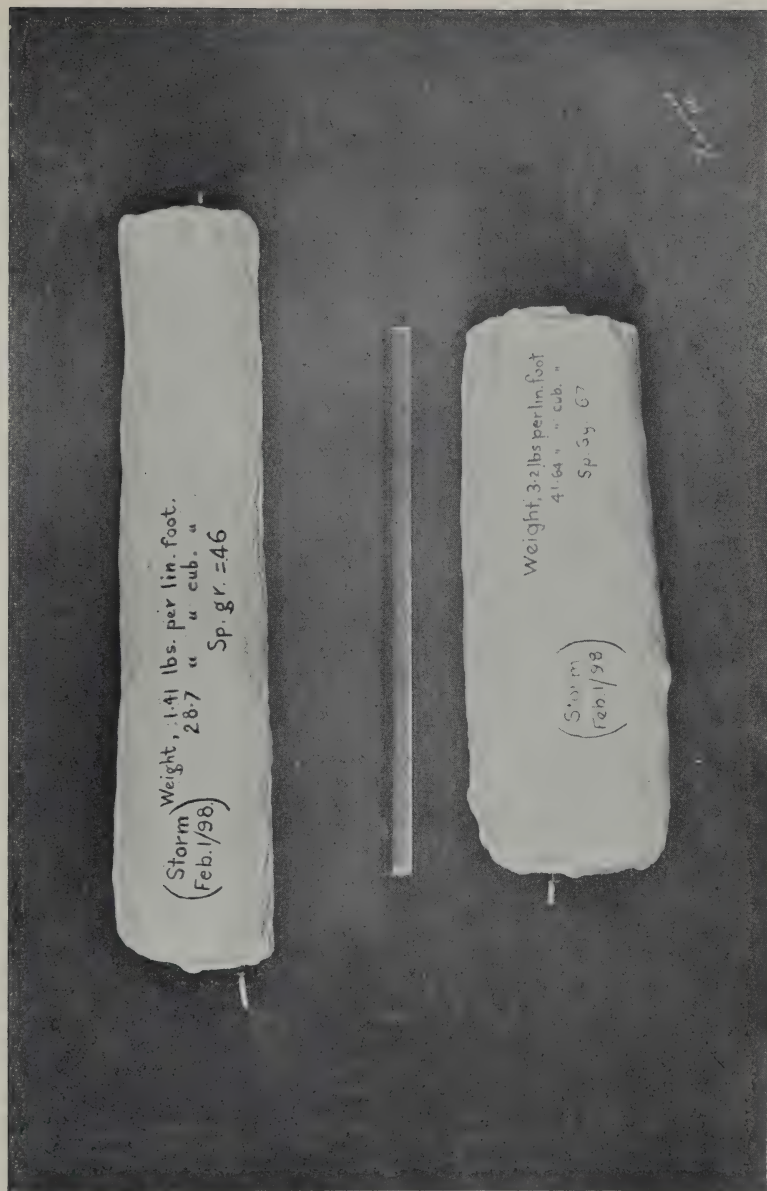
NEW ENGLAND TELEPHONE AND TELEGRAPH COMPANY.

The underground work this year is principally an extension of the system outside the prescribed district. Cement-lined pipe was used almost exclusively for the main conduits. A small amount of wooden duct was laid in Warren street (Roxbury), Pinckney street, Beacon street and Bay State road (Back Bay).

For service connections wrought-iron pipe was employed.

The following is a list of the streets in which conduits have been laid and the number of ducts in each:

Aberdeen	1	Berkeley	6
Alford	4, 6	Brimmer	3
Anderson	3	Canal	2
Bay State road	1	Causeway	2
Beacon	1, 3, 4, 5, 6	Court	10



SHOWING SPECIMENS OF TELEPHONE WIRES COVERED WITH SNOW AND ICE.

Cove	4	Minot	3
Cumberland	1	Morton (Forest Hills) . .	2
Dartmouth	2	Oxford	30
Dorchester ave.	2, 3, 4, 5, 6	Park (Dor.)	4
Dudley (Rox.)	4	Peter Parley (J. P.) . .	2
Essex	28	Pinckney	2
Exeter	4	Pitts	2
Falmouth	2	Portland	6, 8
Federal	4	South	4, 5
Guild row	2	St. James ave.	3
Hanover	4, 5	Sudbury	8
Huntington ave.	4, 3	Traverse	2
Jamaicaway	1	Tremont	2
Kenmore	3, 2	Trinity place	2
Kneeland	4	Walk Hill	4
Main (Chsn.)	4	Warren (Rox.)	4
Marine park (S. B.) . . .	1	Washington (Rox.) . . .	4, 5, 6, 12
Massachusetts ave. . . .	3	Winthrop square	2

The work on Hanover street, Washington street (city proper) and Court street was for the purpose of relocating the conduits on account of subway work by the Boston Transit Commission.

The work on Oxford street was for the purpose of connecting the underground system with a new telephone exchange to be located there.

The cables drawn in during the year are lead-covered and paper-insulated.

The special solid system first laid last year has been extended on Bay State road from Raleigh to Deerfield street, and the same system adopted on Beacon street from Otter street to Massachusetts avenue. This solid system is used in connection with the drawing-in system and the construction consists of 3-inch creosoted wooden boxing, in which is laid a lead-covered paper insulated cable covered with a mixture of sand and pitch. A 5-pair cable is laid from the main cable to the basement of each building in which service is desired.

The work for the year comprised:

58,340 feet of subway.
 254,014 feet of duct.
 196 manholes built.
 214 service connections.
 145,000 feet of cable drawn in.

BOSTON ELECTRIC LIGHT COMPANY.

In the construction work, cement-lined duct is used for the main conduits and wrought-iron pipe for service connections.

The following shows the number of ducts laid in each street:

Audubon road . . . 1	Crescent place . . . 1	Merrimac 4
Allen 1	Cumberland . . . 1	Minot 1
Arundel 1	Dartmouth . . . 2	Norman 1
Avery 1	Eastern avenue . 1	North 1
Beacon 3, 4	Exeter 1, 3	North Grove . . . 1
Beverly 4	Franklin 1	Parkway 1
Blossom 1	Friend 4	Phillips 1
Bosworth 1, 2	Green 1, 4	Pinckney 1
Bowker 1	Grove 1	Pitts 1
Bulfinch 4	Hanover 4	Portland 1, 4
Cambridge . . . 1, 4, 5	Haverhill 1	Somerset 4
Canal 1	Hawley 2	St. Botolph . . . 1
Causeway 4	Haymarket sq. . . 8	Staniford 1
Chambers 1	Howard 2, 4	Sudbury 4
Chardon 1	Leverett 1, 4	Traverse 1
Charles 2, 4, 6	Lynde 1	Tremont 1, 18
Charlestown . . . 4	Massachusetts av. 1	Washington . . . 2
Commercial . . . 1	McLean 1	Westland avenue, 1
Court 4		

The work on Leverett, Charles, Green, Court, Causeway and Cambridge streets was carried on in combination with that of the Boston Elevated Railway Company by request of this department, the two conduits being laid side by side in the same trench, but with separate manholes. This was done to avoid unnecessary street openings and so that the work of burying wires on these streets might be carried on with the least possible inconvenience to the public.

The cables employed by this company are rubber and paper insulated.

During the past year forty-four underground transformers have been installed in the manholes of this company.

The work for the year comprised:

- 39,102 feet of subway.
- 121,004 feet of duct.
- 285 manholes built.
- 398 service connections.
- 394,348 feet of cable drawn in.
- 44 underground transformers installed.

BOSTON ELEVATED RAILWAY COMPANY.

The conduit work of this company in the 1897 district on Leverett, Charles, Green, Court, Causeway and Cambridge streets was done in combination with that of the Boston Electric Light Company. The cables drawn into these conduits connect at Craigie's bridge with sub-marine cables carrying current from the power-house in Cambridge and also tie-in with the cables from the central power-station on Albany street.

In addition a heavy conduit line was laid from the central power-station through Harrison avenue, Savoy, Washington, Acton and Bradford streets to Shawmut avenue. From this point a branch conduit was laid through Shawmut avenue to the subway at Shawmut avenue and Pleasant street, and through the subway, under Tremont street to Boylston street. Another branch conduit was laid through Milford street from Shawmut avenue to Tremont street.

This work furnished a direct route for the subway feeders, independent of the old conduit line through Albany street, and also provided for the removal of the overhead wires on Harrison avenue and Dover street.

Cement-lined duct is used for the main conduits and wrought-iron pipe for the pole connections.

The feeder cables are fibre, paper and rubber insulated, size 500,000 C.M. cross section.

Connections have been made between the rails and the bare return cables in the manholes by means of bare cables laid in the soil.

Terminal poles have been established at the following places :

- Washington at Savoy street.
- Shawmut avenue at Bradford street.
- Shawmut avenue at Milford street.
- Tremont at Milford street.
- Leverett, opposite Brighton street.
- Causeway, opposite Merrimac street.
- Cambridge, opposite Bowdoin street.
- Cambridge at Charles street.
- Opposite No. 92 Court street, near Sudbury street.

SUBWAY CONNECTIONS.

Connections have been made to the subway at the following points :

- Shawmut avenue at Warrenton street.
- Court at Hanover street.

Washington at Hanover street.
 Adams square at Devonshire street.
 Tremont at Boylston street.
 Tremont at Winter street.

The feeder and return cables on Washington street, Hanover street, Adams square, Merrimac street and Cornhill, will remain overhead for the present. Conduits to provide for these wires will be laid later in the sections of the Subway now being constructed by the Boston Transit Commission.

TABLE SHOWING UNDERGROUND WORK BY BOSTON
 ELEVATED RAILWAY COMPANY.

STREET.	From.	To.	Number of Ducts.	FEED CABLES.		RETURN CABLES.	
				No.	Tot'l c.m.	No.	Tot'l c.m.
Leverett	Cable House ...	Craigie's bridge,	20	6	3,000,000	6	3,000,000
"	Craigie's bridge,	Charles	24	6	3,000,000	6	3,000,000
"	Charles	Causeway	21	5	2,500,000	5	2,500,000
"	Causeway	Green	5	2	1,000,000	2	1,000,000
Causeway	Leverett	Lowell	18	3	1,500,000	5	2,500,000
"	Lowell	Canal	17				
Charles	Leverett	Cambridge	5	1	500,000	1	500,000
Green	"	Bowdoin sq. ...	5	2	1,000,000	2	1,000,000
Court	Bowdoin sq. ...	Sudbury	5	2	1,000,000	2	1,000,000
Cambridge	"	Bowdoin	2	1	500,000	1	500,000
Harrison ave...	Power-house ...	Savoy	26	15	7,500,000	15	7,500,000
Savoy	Harrison ave...	Washington ...	25	15	7,500,000	15	7,500,000
Washington ...	Savoy	Acton	24	12	6,000,000	12	6,000,000
Acton	Washington ...	Bradford	24	12	6,000,000	12	6,000,000
Bradford	Acton	Shawmut ave...	24	12	6,000,000	12	6,000,000
Shawmut ave...	Bradford ...	Pleasant	15	4	2,000,000	4	2,000,000
Tremont	Pleasant	Boylston	12	4	2,000,000	4	In Subway, 2,000,000
Milford	Shawmut ave...	Tremont	8	6	3,000,000	6	3,000,000
Franklin	Braintree	Lincoln	12	6	3,000,000	6	At Alston, 3,000,000

The work for the year comprised —

14,625 feet of subway.
 169,863 feet of duct.
 70 manholes built.
 17 service connections.
 97,915 feet of cable drawn in.



SHOWING A MANHOLE IN THE COURSE OF CONSTRUCTION, AND TWO OBSTRUCTIONS,
A BRICK SEWER AND WATER MAIN.

EDISON ELECTRIC ILLUMINATING COMPANY.

The "drawing-in" system first adopted last year for feeder circuits has been largely extended during the year.

In the conduit construction cement-lined and vitrified clay ducts were employed.

The appended table shows the streets in which these conduits were laid, the number of ducts, and the number of feeder cables drawn in:

Street.	From.	To.	Number Ducts.	Number Feeder Cables.
Head place	Edison station	1 Head Place	56	33
Head place	1 Head place	Boylston	45	27
Boylston	Head place	Tamworth	6	3
Tamworth	Boylston	Hotel Touraine	6	3
Bumstead court	Edison station	Boylston	45	36
Across Boylston	Bumstead court	South side	21	21
Boylston	Bumstead court	Washington	18	3
Washington	Boylston	Essex	18	3
Essex	Washington	Federal	12	3
Federal	Essex	Atlantic avenue	12	3
Atlantic avenue	Federal	Edison station	12	3
Griffith's wharf	Edison station	Office	9	3
Hawkins	Edison station	Chardon	21	6
Chardon	Hawkins	Bowdoin square	18	6
Cambridge	Bowdoin square	Bowdoin	12	6
Cambridge	Bowdoin	Joy	6	3
Bowdoin	Cambridge	Beacon	9	3
Beacon	Bowdoin	Park	9	3
Harrison avenue	Essex	Dover	6	3
Dover	Harrison avenue	Washington	6	6
Dover	Washington	Tremont	6	3
Tremont	Dover	Montgomery	6	3
Montgomery	Tremont	Canton	6	3
Canton	Montgomery	Edison station	12	3
Scotia	Edison station	Dalton	6	3
Dalton	Scotia	Falmouth	6	3
Falmouth	Dalton	West Newton	6	3
West Newton	Falmouth	Huntington ave	6	3
Across Huntington avenue at West Newton			9	3

Feeder-boxes have been located in the following manholes:

Opposite No. 1 Head place	1
Boylston street at Head place	2
Boylston street at Bumstead court	1
Boylston street, near Boylston square	2
Essex street at Harrison avenue	1

Distribution boxes have been located in the following manholes:

Dover street at Washington street	1
Dover street at Shawmut avenue	1
Cambridge street at Joy street	1
Beacon street at Park street	1
Huntington avenue at West Newton street	1
Tremont street at Milford street	1

The feeder-cables are rubber and paper insulated, and of the following sizes:

Positive and negative are of 1,000,000 c.m. cross section, neutral of 350,000 c.m. cross section.

The pressure wire cables are rubber insulated and contain three and twelve conductors.

Summary of cement-lined and vitrified clay conduit work:

16,258 feet of subway.
 149,656 feet of duct.
 69 manholes built.
 81,630 feet of cable drawn in.

In addition, the old solid system has been extended during the year to provide for additional service. Only one new feeder has been laid, but the number of mains has been largely increased. The following streets have been opened for this work:

Albany,	Dartmouth,	Merrimac,
Ash,	Devonshire,	Middlesex,
Atlantic ave.,	Doane,	Mt. Vernon,
Batterymarch,	Federal,	Myrtle,
Beacon,	Ferdinand,	Newbury,
Bennett,	Fort Hill sq.,	North,
Berkeley,	Fulton,	North End Park,
Blagden,	Gloucester,	Oak,
Blossom,	Hancock,	Poplar,
Broad,	Hanover,	Quincy row,
Chambers,	Harvard,	Richmond,
Charles,	High,	River,
Chestnut,	Huntington ave.,	Shawmut ave.,
Clarendon,	India,	Staniford,
Clinton,	Isabella,	State,
Columbus ave.,	La Grange,	Summer,
Cooper,	Lewis,	Temple place,
Commercial,	Malden,	Tremont,
Cross,	Mason,	Washington,
Custom House,	Massachusetts ave.,	Willow.

The total amount of 3-wire Edison tube laid during the year is 46,481 feet, made up of —

2,036 feet of feeder.
 35,104 feet of main.
 9,341 feet of service.
 278 service connections.

In many cases steel-armored cable is used instead of tube for service connections.

Forty junction boxes have been set, the largest 10-way.

COMBINATION OF SMALL COMPANIES.

This association consists of the following low-tension companies :

Boston Automatic Fire Alarm Company.
 Boston Electric Protective Association.
 Boston District Messenger Company.
 Mutual District Messenger Company.
 Holmes Electric Protective Company.
 Postal Telegraph Cable Company.
 Mixer Brothers.
 United Telegram Company.
 Stock Quotation Telegraph Company.

The manholes and service connections are used in common by all the companies.

Wrought-iron pipe is used both in the conduits and in the service connections.

The appended table shows the number of ducts laid in each street, the number and location of the ducts used by each company, the companies in common, and the spare ducts.

Combination of Small Companies.

LOCATION OF DUCTS ASSIGNED TO THE INDIVIDUAL COMPANIES.

STREET.	From.	To.	B. Auto. F. A. Co.	B. Elec. Prot. Ass'n.	B. Dist. Mess. Co.	Mut. Dist. Mess. Co.	Holmes El. Prot. Co.	Postal Tel. Co.	Mixer Bros.	United Telegram Co.	Stock Quotation Co.	Joint.	Spare.	Total.
Broad.....	Milk.....	38 Broad.....	*	..	..	*	*	1	*	..	..	2	..	3
Broad.....	38 Broad.....	Doane.....	*	..	..	*	..	..	*	*	..	2	1	3
Doane.....	Broad.....	32 Doane.....	*	..	..	*	*	..	*	*	..	2	..	2
Elm.....	Brattle sq.....	Hanover.....	*	*	*	*	*	..	*	*	..	2	1	3
Across Park sq....	13 Park sq.....	Hotel Thorndike	*	*	..	..	*	*	..	..	..	1	1	2
Elm.....	Brattle sq.....	Washington....	*	*	..	*	*	..	*	..	..	1	2	3
Washington.....	Elm.....	Hanover.....	*	*	..	*	*	..	*	..	..	1	1	2
Across Atlantic av.	575 Atlantic av...	590 Atlantic av..	*	*	*	*	*	..	..	..	..	1	1	2
Hanover... ..	Elm.....	Portland.....	*	*	*	*	*	..	*	*	..	2	1	3
Portland.....	Hanover.....	15 Portland.....	*	*	*	*	*	..	*	*	..	2	1	3
Across Federal....	121 Federal.....	130 Federal.....	*	*	..	*	*	..	*	..	..	1	..	1
Across Winter.....	15 Winter.....	38 Winter.....	*	*	*	*	*	*	*	*	1	2	..	3
Across Congress..	273 Congress.....	286 Congress....	*	*	*	*	*	..	..	..	..	1	..	1

* Company occupies duct jointly.

Until this year temporary exemptions were granted to the wires of this association crossing a few streets at points distant from the underground system, as the number of such wires would hardly warrant an extension of the conduit system. During the past year many of these wires have been removed and placed underground in conduits laid across these streets from building to building.

The underground work in Park square, Atlantic avenue, Federal street, Winter street and Congress street is of this nature.

The cables drawn in by this association are paper, rubber and fibre insulated. They are of the following sizes: 2, 3, 4, 5, 6, 7, 8, 10, 12, 14, 15, 20 and 30 conductor and 2, 3, 8, 15, 65, 76, 83 and 105 pair.

The amount of cable drawn in by each company will be found under the heads of individual companies.

The work of the year consists of —

1,144 feet of subway.
5,996 feet of duct.
12 manholes built.
27 service connections.

BOSTON POLICE SIGNAL SYSTEM (BOSTON POLICE DEPARTMENT).

The work of this department consisted in setting new signal posts and connecting the boxes and station in Division 3 and Division 16 by an underground system. The ducts of the New England Telephone and Telegraph Company were utilized wherever possible, and the construction work consisted in making connections from the manholes of this company to the police-boxes and stations, necessitating in some cases the laying of single-duct conduits.

A single duct wrought-iron conduit with manholes was laid in each of the following streets:

Berkeley,	Green,	Marine park,
Cambridge,	Howard,	Norman,
Causeway,	Joy,	North Grove,
Chestnut,	Leverett,	Temple.
Court,		

The cables drawn in are rubber insulated, size, 7 and 4 conductor.



VIEW OF A 36-DUCT CONDUIT BUILT THROUGH THE CELLAR OF A PRIVATE HOUSE, THERE BEING NO ROOM IN THE STREET.

Plate No. 20.

The work for the year comprised —

5,191 feet of subway.
8,451 feet of duct.
9 manholes built.
43 service connections.
53,000 feet of cable drawn in.

BOSTON FIRE DEPARTMENT (FIRE ALARM BRANCH).

This department utilizes the ducts of the New England Telephone and Telegraph Company wherever possible, and connections are made from the manholes of this company to the new combination posts, each of which supports a signal box and gas lamp.

One-duct conduits were laid in the following streets :

Blossom,	Exchange pl.,	Poplar,
Central,	Marine park,	Spring,
Chardon,	North Grove,	Spruce.
Congress,		

The conduit on Congress street, Exchange place and Central street was laid in the same trench with a 12-inch salt-water pipe for fire purposes, and will provide a means of communication between the fire-boat and the fire-posts in the district. This conduit consists of a single cement-lined pipe laid in concrete, and terminating in manholes in which are located the gates controlling the water-supply.

The cables drawn in by this department are rubber insulated and contain 10, 15, 19 and 37 conductors.

The work for the year consisted of —

6,492 feet of subway.
9,935 feet of duct.
22 manholes built.
25,996 feet of cable drawn in.
46 service connections.

BOSTON AUXILIARY FIRE-ALARM COMPANY.

Nine signal boxes of the Boston Auxiliary Fire-Alarm Company have been connected to the underground system of the Fire Department during the year.

BROOKLINE GAS LIGHT COMPANY.

The station of this company is located in Allston, and the business is confined chiefly to Allston, Brighton, Brookline

and the Back Bay District. During the past year this company has engaged in underground work in the Back Bay on Bay State road and Boylston-street extension.

The work on Bay State road consisted in laying three cement-lined ducts with manholes and handholes from Granby street to No. 74 Bay State road. The top duct is for distribution purposes, and is provided with handholes, about fifty feet apart, set opposite each house lot.

A similar conduit of three ducts was laid in Boylston-street extension from Brookline avenue to Ipswich street.

Wrought-iron pipe is employed for service connections. The cables drawn into the conduit on Boylston-street extension are lead-covered and rubber-insulated, and carry current for arc-lighting purposes.

The work for the year comprised —

- 4,260 feet of subway.
- 12,250 feet of duct.
 - 12 manholes and 83 four-way boxes built.
 - 14 service connections.
- 1,248 feet of cable drawn in.

WESTERN UNION TELEGRAPH COMPANY.

This company laid a line of wrought-iron pipe through Exchange street and Dock square, from State street to Devonshire street, and through Friend street from Washington street to Causeway street, this latter being in addition to an old conduit to provide an additional service.

The cables drawn into the ducts of this company during the year are rubber and fibre insulated, and contain 4, 10, 20, 30, 40, 60, 80 and 100 conductors.

The work for the year consisted of —

- 1,842 feet of subway.
- 2,732 feet of duct.
 - 3 manholes built.
 - 11 service connections.
- 13,217 feet of cable drawn in.

CHURCH GREEN ELECTRIC LIGHT AND POWER COMPANY.

The conduit work of this company during the year was confined to High street and Devonshire street, where a single wrought-iron pipe with handholes was laid to provide underground service and permit the removal of overhead wires. The cables drawn in during the year are rubber insulated and of the following sizes: 0, 00 and 0000.

The work for the year comprised —

426 feet of subway.
946 feet of duct.
4 manholes built.
9 service connections.
2,620 feet of cable drawn in.

PARK DEPARTMENT AND PUBLIC GROUNDS DEPARTMENT.

During the year underground construction has been carried on at Franklin Park and Pine Bank. In each place arc light poles were connected underground by a 2-inch wrought-iron pipe and 3-way boxes.

On account of the subway work in Boston Common changes were necessitated in the underground electrical service to the arc lamps in the Common between Park street and West street. The work consisted in laying a 2-inch wrought-iron pipe with 3-way boxes, and in drawing in rubber insulated cable to furnish current for the arc lamps.

The work for the year comprised —

6,016 feet of subway.
6,151 feet of duct.
15 manholes built.
27 service connections.
10,308 feet of cable drawn in.

PUBLIC INSTITUTIONS DEPARTMENT.

The only underground work of this department during the year consisted in drawing cable into the underground system at Deer Island for incandescent lighting purposes.

The cables drawn in are rubber insulated and lead covered, and of the following sizes: 0000 and 350,000 circular mills.

MASSACHUSETTS HOMŒOPATHIC HOSPITAL.

This corporation laid two wrought-iron pipes underground across Stoughton street from the hospital building to the Nurses' Home. The cables drawn into this conduit are lead covered and rubber insulated, and carry current from the dynamo in the hospital building to incandescent lamps in the Nurses' Home.

Summary of the work —

510 feet of subway.
1,020 feet of duct.
2 manholes built.
2 service connections.
1,040 feet of cable drawn in.

BARNES & DUNKLEE (HOTEL BRUNSWICK).

The work consisted in installing incandescent lights in posts in front of Hotel Brunswick, the current for the same being supplied from the private plant in the hotel by means of rubber insulated wire in wrought-iron pipe.

The work comprised 215 feet of pipe, and 215 feet of duplex cable.

H. N. CLARK & COMPANY.

This firm laid a 1½-inch wrought-iron pipe across North Centre street from the cellar of building No. 4 to cellar of building No. 9. Into this duct a telephone cable was drawn.

The work comprised 43 feet of duct, and 43 feet of cable.

BOSTON DISTRICT MESSENGER COMPANY.

The underground conduit is owned by the Combination of Small Companies. This company drew in 2,005 feet of paper insulated cable.

POSTAL TELEGRAPH CABLE COMPANY.

This company drew 2,441 feet of cable into the ducts owned by the Combination of Small Companies and made four connections on its own underground system. The cables drawn in are rubber, fibre and paper insulated.

BOSTON AUTOMATIC FIRE-ALARM COMPANY.

The construction work was done in combination with the other small companies; 2,285 feet of rubber insulated cable were drawn into the ducts of this system.

BOSTON ELECTRIC PROTECTIVE ASSOCIATION.

This company is a member of the Combination of Small Companies and drew 2,797 feet of rubber insulated cable into the ducts reserved for its use.

HOLMES ELECTRIC PROTECTIVE COMPANY.

This company drew 3,912 feet of rubber insulated cable into the ducts owned by the Combination of Small Companies of which it is a member.

UNITED TELEGRAM COMPANY.

This conduit is owned by the Combination of Small Companies. The cables drawn into the ducts of this system are



VIEW OF A 21-DUCT CONDUIT, SHOWING METHOD OF CONSTRUCTION; TRENCH
9 FEET DEEP, TO AVOID OBSTRUCTIONS.

Plate No. 21.

rubber and paper insulated. Total, 1,026 feet of cable drawn in.

MIXER BROTHERS.

This firm drew 2,075 feet of paper insulated cable into the ducts owned by the Combination of Small Companies of which it is a member.

MUTUAL DISTRICT MESSENGER COMPANY.

During the year this company drew 3,287 feet of rubber insulated cable into the ducts owned by the Combination of Small Companies.

STOCK QUOTATION TELEGRAPH COMPANY.

This company is a member of the Combination of Small Companies ; 700 feet of cable (rubber insulated) were drawn into the ducts of the system.

SUBURBAN LIGHT AND POWER COMPANY.

This company has never laid any underground conduits, but uses the ducts of the Boston Electric Light Company whenever necessary. During the year 2,466 feet of rubber insulated cable were drawn into the ducts of this system.

SUMMARY OF WORK OF 1897.

COMPANIES.	Feet of Subway.	Feet of Duct.	Feet of Cable.	Number of Con- nections.	Number of Man- holes.
New Eng. Tel. & Tel. Co.....	58,340	254,014	145,000	214	196
Boston Electric Light Co.....	39,102	121,004	394,348	398	285
* Edison Electric Illuminating Co..	16,258	149,656	81,630	278	69
Boston Elevated Railway Co.....	14,625	169,863	97,915	17	70
Boston Fire Department.....	6,492	9,935	25,996	46	22
Boston Police Signal Service.....	5,191	8,451	53,000	43	9
Brookline Gas Light Co.....	4,260	12,250	1,248	14	95
Park and Public Grounds Dept.	6,016	6,151	10,308	27	15
Combination of Small Companies ..	1,144	5,996	†	27	12
Western Union Co.....	1,842	2,732	13,217	11	3
Church Green Electric Light and Power Co.....	426	946	2,620	9	4
Mass. Homœopathic Hospital.....	510	1,020	1,020	2	2
Barnes & Dunklee	215	215	215	8	
Postal Telegraph Cable Co.....	116	116	2,441	4	
H. N. Clark.....	43	43	43	1	
Public Institutions Department.....			4,240		
Suburban Light & Power Co.....			2,466		
Holmes Electric Protective Co.....			3,912		
Mutual District Messenger Co.....			3,287		
Boston Electric Protective Asso- ciation.....			2,797		
Boston Automatic Fire Alarm Co...			2,285		
Mixer Bros.			2,075		
Boston District Messenger Co.....			2,005		
United Telegram Co.....			1,026		
Stock Quotation Co.....			700		
Totals.....	154,580	742,392	853,794	1,099	782

* Also 37,223 feet of subway and 46,481 feet of duct of 3-wire solid tube with 40 distribution boxes.

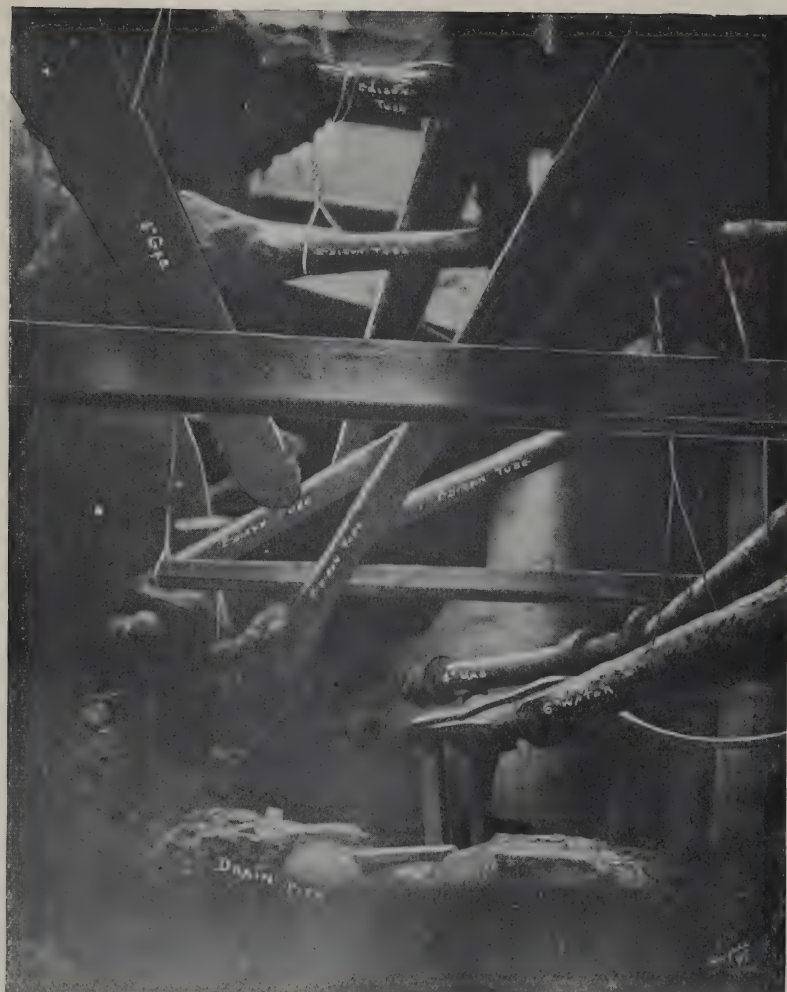
† See individual companies.

Table showing the Amount and Distribution of Boston's Electrical Power, February 1, 1898.

COMPANIES.	Total rated Horse Power of Boilers.	Total rated Horse Power of Engines.	Capacity in Incandescent Lamps.	Capacity in Arc Lamps.	Number of Motors.	Horse Power of Motors.	Number of Stations.
Boston Elevated Railway Co. ....	.....	34,450	24,840	94	3,413	36,530	7
Boston Electric Light Co.	6,090	9,142	32,700	4,890	791	2,282½	6
Edison Electric Illuminating Co.	6,419	8,125	161,840	1,505	1,751	5,901	5
Suburban Light and Power Co.	895	1,150	7,750	495	140	614	2
Charlestown Gas and Electric Light Co. ...	625	525	6,000	510	7	25½	1
Brookline Gas Light Co.	875	2,645	8,200	680	21	180	2
Church Green Electric Light and Power Co.	770	685	6,500	.....	42	210	1
Isolated Plants.....	.....	.....	107,708	1,410	273	2,887	178
Block Plant.....	273	287	2,300	.....	9	12½	1

Table showing Underground Electrical Service of Boston.

COMPANY OWNING.	Feet of Subway.	Feet of Duct.	LENGTH OF CABLE IN FEET.				Feet of Single Conductor in Cables.	No. of Service Connections.	No. of Man-holes.
			For Light and Power.	For Telephone and Telegraph.	For Signalling and Miscellaneous.	Total.			
New England Telephone and Telegraph.....	292,261	1,846,612	.....	982,254	.....	982,254	200,100,000	897	1,222
Boston Electric Light	164,001	772,159	1,767,224	10,243	.....	1,777,467	1,777,467	1,104	918
Edison Electric Illuminating	21,467	200,245	85,462	.....	35,400	120,862	227,062	3,450	87
Boston Elevated Railway	44,132	547,840	523,586	14,328	.....	537,914	537,914	49	180
Combination of Small Companies.....	13,153	72,503	.....	.....	.....	*	.....	107	88
Park Department and Public Grounds	17,803	96,238	116,109	.....	.....	116,109	116,109	306	37
Western Union Telegraph	29,882	72,923	.....	75,328	.....	75,328	4,981,094	56	97
Postal Telegraph Cable.....	11,682	29,313	.....	18,739	.....	18,739	887,663	28	77
Boston Police Signal Service.....	13,663	24,305	.....	.....	137,755	† 137,755	926,408	142	31
Boston Fire Alarm	12,329	20,761	.....	.....	102,500	† 102,500	4,244,007	134	31
Quincy Market Cold Storage	1,854	7,008	15,154	.....	2,526	17,680	40,414	4	4
Boston District Messenger	4,231	4,365	.....	.....	6,958	6,958	117,516	1	2
Brookline Gas Light	4,348	13,714	3,648	.....	.....	3,648	3,748	23	115
Church Green Electric Light and Power	3,613	4,731	15,340	.....	.....	15,340	15,340	22	21
United States Sub-Treasury Department	1,403	1,403	4,300	.....	.....	4,300	5,710	1	5
Public Institutions and Hospital Departments	3,172	11,642	10,399	.....	.....	10,399	10,399	17	3
Boston Water Department	2,670	2,690	.....	.....	2,690	2,690	2,690	1	1



VIEW OF SOME OF THE OBSTRUCTIONS MET WITH IN LAYING
ELECTRICAL CONDUIT.

Plate No. 22.

		15,812		15,812	† 15,812	15,812	12
Suburban Light and Power							
Boston & Albany Railroad	175	725	830	480	1,310	1,360	3
Boston & Maine Railroad	700	700	700		700	1,400	2
Winch Brothers	317	317	317		317	634	2
D. Webster King	160	240	320		320	320	2
C. A. & J. G. Damon	194	388	630	210	840	1,890	1
Boston Electric Protective Association					9,711	89,042	
Boston Automatic Fire Alarm					10,280	318,435	
Holmes Electric Protective					10,173	700,128	
Mutual District Messenger					10,719	212,315	
United Telegram	1,339	1,359			5,076	77,826	
Stock Quotations					700	700	
Mixer Brothers					4,628	392,106	
American Telephone and Telegraph				1,500	1,500	300,000	2
Massachusetts Homœopathic Hospital	510	1,020	1,020		1,020	1,020	2
Miscellaneous	458	608	3,215	143	3,358	3,560	19
Totals	645,537	3,733,809	2,564,066	1,102,745	4,006,497	216,110,089	6,387
							2,920

* See individual companies.

† Principally in the ducts of other companies.

‡ In the ducts of the Boston Electric Light Company.

The Edison tubes are not enumerated as ducts, nor the conductors therein as cables.
 The amount of Edison tube is 330,352 feet.
 The amount of single conductors therein, 1,429,182 feet.
 Number of distribution boxes in solid system, 368.

The practice of taking photographs of the most interesting portions of the work of the department, showing the condition of the poles, fixtures and wires in the streets and on the housetops, together with the conduits, manholes, etc., under the streets, has been continued, and a number of such illustrations are presented in this report.

Plate No. 1 shows the condition of the roof of the building No. 183 Devonshire street, with large structures, and the wires and cables they supported erected thereon.

Plate No. 2 shows the conditions as they exist to-day, structures and wires having been removed.

Plate No. 3 is a view from the roof of the Boston "Globe" building, showing wires, cables and structures as they have existed.

Plate No. 4 is a view from the same spot as that of Plate No. 3 with the obstructions shown in said plate removed; the marked difference in the two views can be seen without artificial aid to the ordinary vision.

Plate No. 5 shows views of Hanover street before and after the removal of the poles and wires from the same.

Plate No. 6 gives views of Commercial street when two lines of poles supporting a large number of wires occupied both sides of this street. It also shows the improved appearance of the street with these lines removed.

Plate No. 7 gives two views of Devonshire street, one showing the wires crossing and recrossing the same from the fixtures on the roofs of the tall buildings, the other showing the street as it now appears with them removed.

Plate No. 8 is the first of a series of views, showing the effects of the snowstorm of January 31–February 1 of the present year; in this case a roof structure was torn from its fastenings by the weight of snow and ice that accumulated on the wires it supported.

Plate No. 9 shows another view of a roof fixture pulled down during the storm, which narrowly escaped falling into the street below.

Plate No. 10 is a view of the corner of Northampton and Washington streets, where a large number of horses were killed by coming in contact with broken low tension wires that were charged by high tension circuits across which they had fallen.

Plate No. 11 shows a large pole on Roxbury street. The lower portion of this pole stands erect, the top was broken off, and rested on the building in front of which it stood.

Plate No. 12 is a view of Roxbury street at Guild row, showing another large pole broken off and with its tangled mass of snow-encased wires resting on the ground.

Plate No. 13 is a view of Harrison avenue, showing a large pole, sixty feet high, broken off about midway between the ground and the lower cross-arm, the upper portion being held erect by the wires it was intended to support. This pole carried 110 low tension and 18 high tension wires, the latter being below the former, a form of construction that is not approved by this department, because it adds to the dangers attending the transmission of electrical energy, particularly during a storm of this character.

Plate No. 14 is a view of Commonwealth avenue, showing the wires encased in snow and ice, many of them being broken, while others are elongated to the breaking point by the excessive weight imposed on them.

Plate No. 15 is a view of North Harvard street, showing three large poles broken off, one of which is resting on the roof of a dwelling, one on the limb of a tree, while the third is supported by the combined strength of the wires.

Plate No. 16 is a view of Swett street from Andrews square, South Boston, where two lines of poles each carrying trunk lines of wires can be seen hanging in the street, where they were carried by excessive weight and the force of the wind. It also shows the amount of snow and ice which accumulated on the wires that are shown in the foreground.

Plate No. 17 is a view on Lamartine street, showing two broken poles, the tops with their cross-arms and wires being held up by the roof of the building which is occupied by the Boston Ice Company. These poles support the wires of the Boston Fire-Alarm Telegraph, the New England Telephone and Telegraph Company and electric light wires, a very undesirable combination at any time, but particularly during a storm of this kind.

Plate No. 18 shows two pieces of No. 12 iron wire encased in snow and ice. One of these pieces weighed one and forty-one one-hundredths (1.41) pounds per linear foot, while the other weighed three and two-tenths (3.2) pounds per linear foot, or in one case the weight of 100 lineal feet was 141 pounds and in the other 320 pounds. A large amount of the overhead wires remained in the condition herein depicted until a warm rain came to remove this covering.

Plate No. 19 is a view of a manhole in which sections of the underground conduits terminate. This view was taken during the process of construction. Herein is shown very clearly two of the many obstructions met with in the construction of electrical conduits. In this particular case they consist of an 18-inch water-pipe at the top, and a 3-feet brick sewer through the bottom of the manhole. In this case it

was necessary to enclose the sewer within the manhole, but the water-pipe was avoided by shelving in the upper part of the brickwork, leaving the pipe on the outside. This is done in all cases, where possible, for two reasons, viz., to facilitate repairs and changes when needed, and to carry out the policy of this department of keeping the ducts and cables as widely separated as possible from water, gas or other metal pipes that might convey current into buildings in case of failure of the insulation of the cables.

Plate No. 20 is a view of a thirty-six duct conduit owned by the Edison Electric Illuminating Company which runs through the cellar of a private house in order to reach their Head-place station. This plan was adopted because there was no room in the street in which to lay this conduit. In many of the narrow streets of the city it proved a very difficult problem to find a sufficient amount of room to lay the necessary conduits; the sidewalks had to be invaded in many cases in order to complete the system.

Plate No. 21 is a view of the method of laying underground conduit. This trench is 9 feet deep in order to avoid the 8-inch gas pipe shown on the right of the plate and other obstructions that were met, but not here shown.

Plate No. 22 is a fair sample of some of the obstructions met and difficulties to be overcome in the construction of underground conduits. This trench contains one 6-inch water-pipe, one 6-inch and one 4-inch gas pipe, 5 Edison tubes and a large drain pipe; and in addition to these, space had to be found in which to place electrical conduits.

Plate No. 23 shows the method of laying wrought-iron conduit on the bridges; it also gives a clear view of the manner in which they enter the manhole shown in the foreground.

Plate No. 24 is a view of the subway through which are run the cars of the Boston Elevated Railway Company. On each side are laid conduits, containing six ducts each; on the left is shown one of the manholes used for the conduit system in the subway.



VIEW OF A 20-DUCT WROUGHT-IRON CONDUIT CROSSING CRAIGIE'S BRIDGE, WITH OPEN
MANHOLE IN THE FOREGROUND.

STATEMENT OF DEPARTMENT APPROPRIATION AND EXPENDITURES, FROM FEBRUARY 1, 1897, TO JANUARY 31, 1898.

Amount of appropriation	\$50,000 00	
Unexpended balance from 1896-97 appropriation	2,029 06	
		\$52,029 06

Amount of expenditures :

Salaries :

Commissioner	\$5,000 00	
Employees	42,692 42	
		\$47,692 42
Horse-keeping, shoeing, etc.	1,189 69	
Printing	874 07	
Stationery	689 91	
Instruments, tools, etc.	194 81	
Travelling expenses	845 55	
Telephone service	383 74	
Advertising	98 75	
Badges	30 00	
Police and fire notification	30 00	
		\$52,028 94

Unexpended balance		\$0 12
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THOMAS W. FLOOD,

Commissioner of Wires.

LIST OF PROPERTY OF THE WIRE DEPARTMENT.

- 1 Test Board, capacity 220 volts and 300 amperes.
- 1 Auxiliary Test Board, capacity 220 volts and 150 amperes.
- 1 Auxiliary Test Board, capacity 220 volts and 75 amperes.
- 1 Weston Direct Reading Voltmeter, No. 3,317, 300 volts.
- 1 Weston Direct Reading Voltmeter, No. 4,747, 15 volts.
- 1 Weston Direct Reading Ammeter, No. 926, 150 amperes.
- 1 Weston Direct Reading Voltmeter, No. 3,438, 1,500 volts.
- 1 Weston Direct Reading Mil-Ammeter, No. 2,433, 1,500 mil-ammeter.
- 1 Weston Direct Reading Voltmeter, No. 6,020, 300 volts.
- 1 Weston Direct Reading Ammeter, No. 2,428, 500 amperes.
- 1 Standard Portable Alternating and Direct Current Voltmeter, No. 1,044, 300 volts.
- 1 Reflecting Galvanometer, Condenser, Telescope, Scales, etc.
- 2 Bichloride of Silver Batteries, 150 cell and 60 cell.
- 1 Queen Testing Set, No. 389.
- 1 Weston Direct Reading Ammeter, No. 2,381, 50 amperes.
- 1 Generator, 50,000 ohms.
- 1 Discharge Key.
- 1 Reversing Key.
- 1 Lamp-stand and Scale.
- 1 Shunt Coil.
- 1 Set Double Connector Posts.
- 1 Set Standard Resistance Coils.
- 3 Horses.
- 2 Express Wagons.
- 1 Business Wagon.
- 1 Buggy.
- 1 Sleigh.
- 4 Sets of Harness.
- 3 Robes.
- 10 Blankets
- Miscellaneous tools used in connection with overhead construction.
- Draughting instruments.



VIEW OF THE INTERIOR OF THE BOSTON ELEVATED RAILWAY COMPANY'S SUBWAY, SHOWING LOCATION
OF CONDUITS ON EACH SIDE.

There are on file in this office plans, showing pole locations in the city of Boston; also plans of the electrical subways.

The photographic apparatus consists of two cameras, one wide angle lens, developing, printing and toning outfits complete; in connection with the same there is a valuable collection of photographs, showing streets before and after being cleared of poles and wires; also views of crowded fixtures, fires, accidents, etc.

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